

L. P. BLAIR.  
Gas-Governor.

No. 226,479.

Patented April 13, 1880.

Fig. 1.

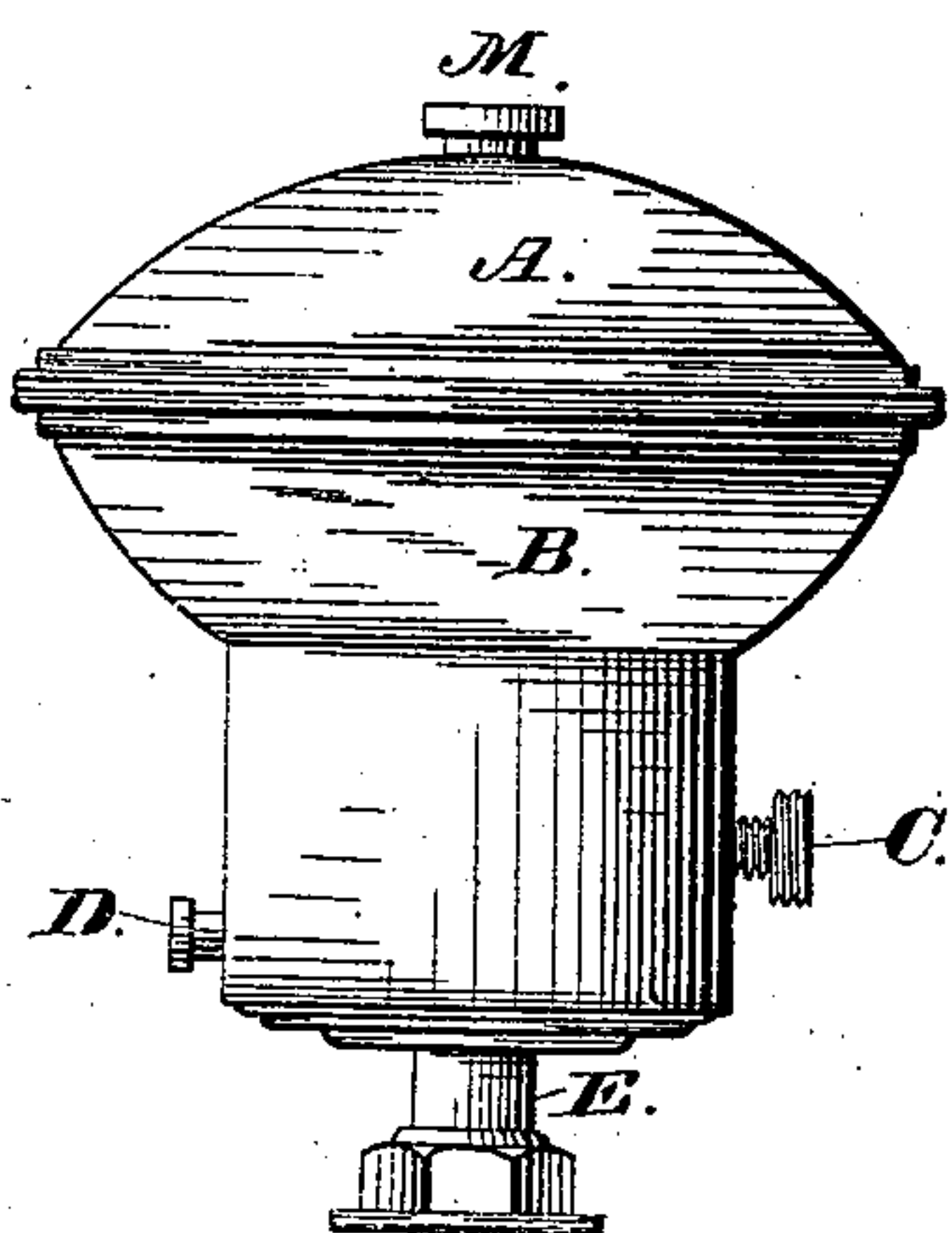


Fig. 2.

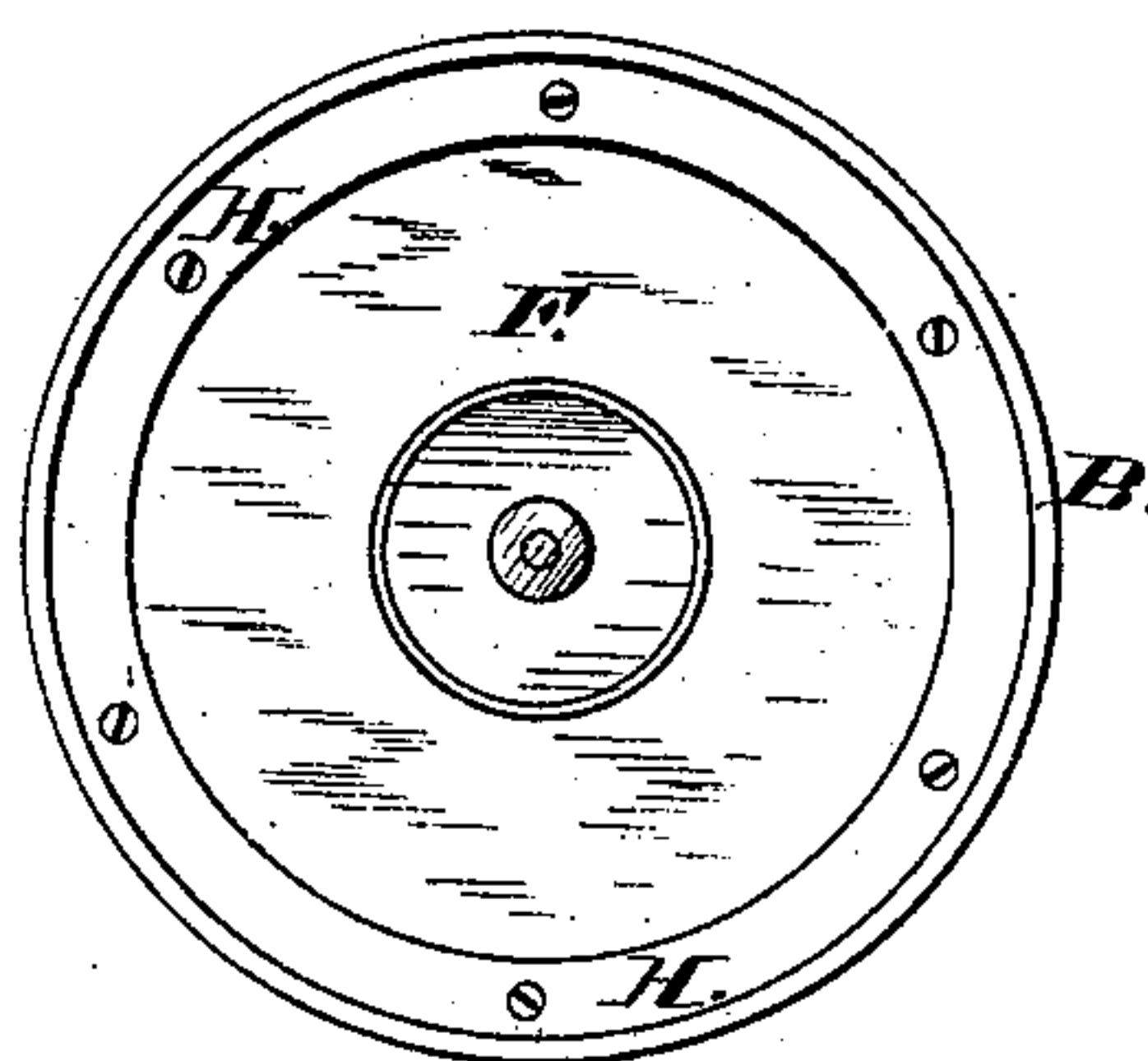


Fig. 3.

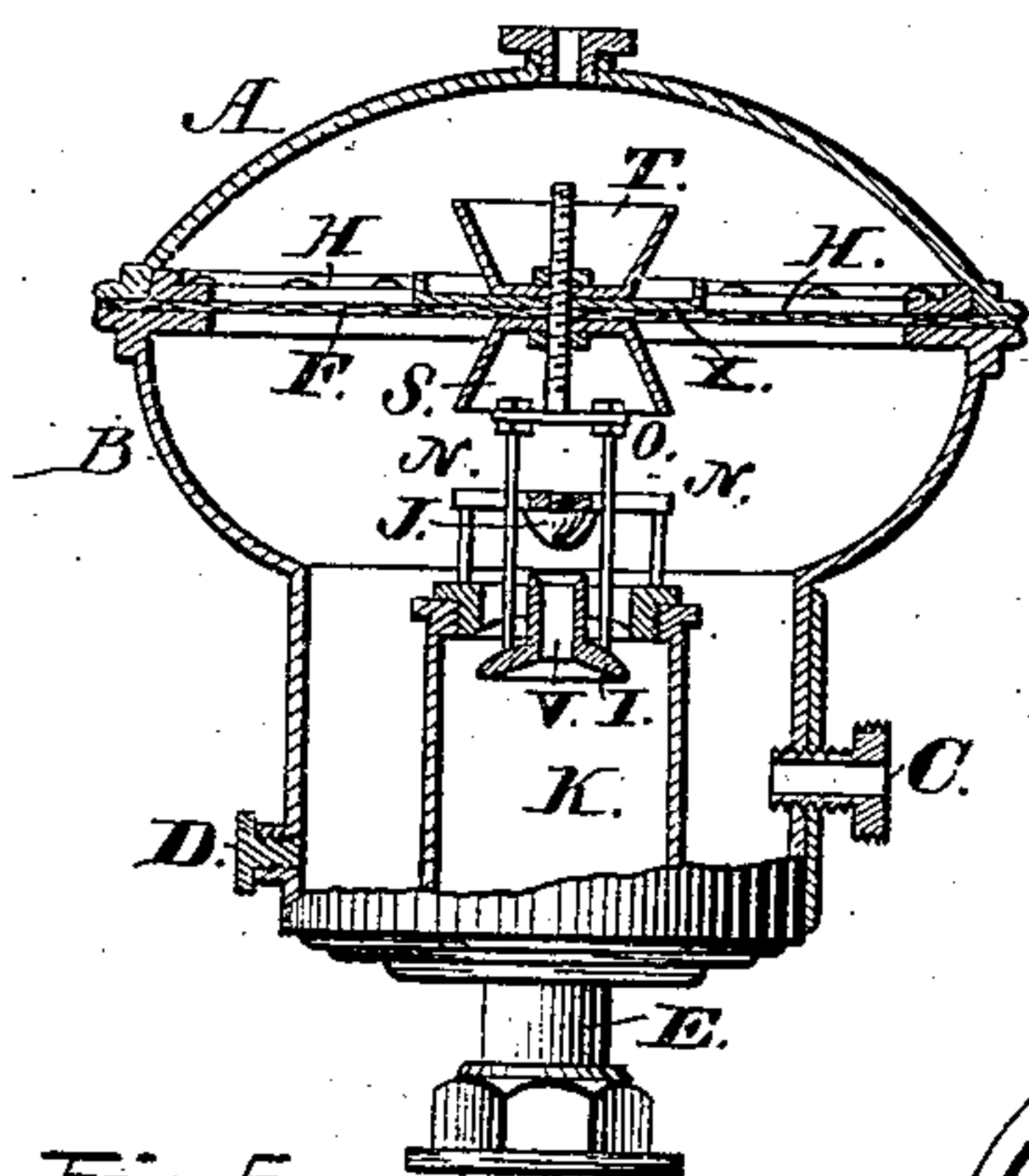


Fig. 4.

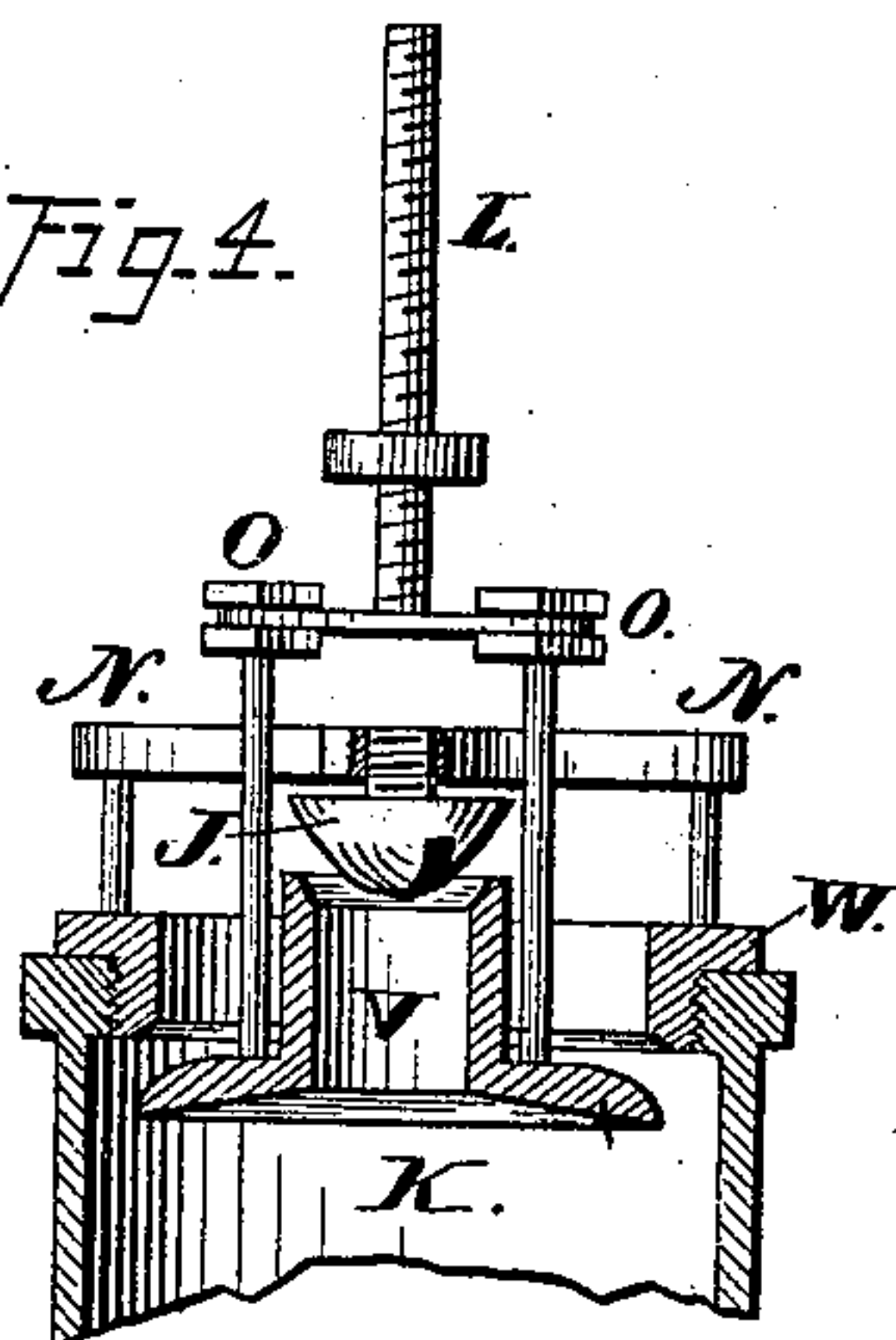


Fig. 6.

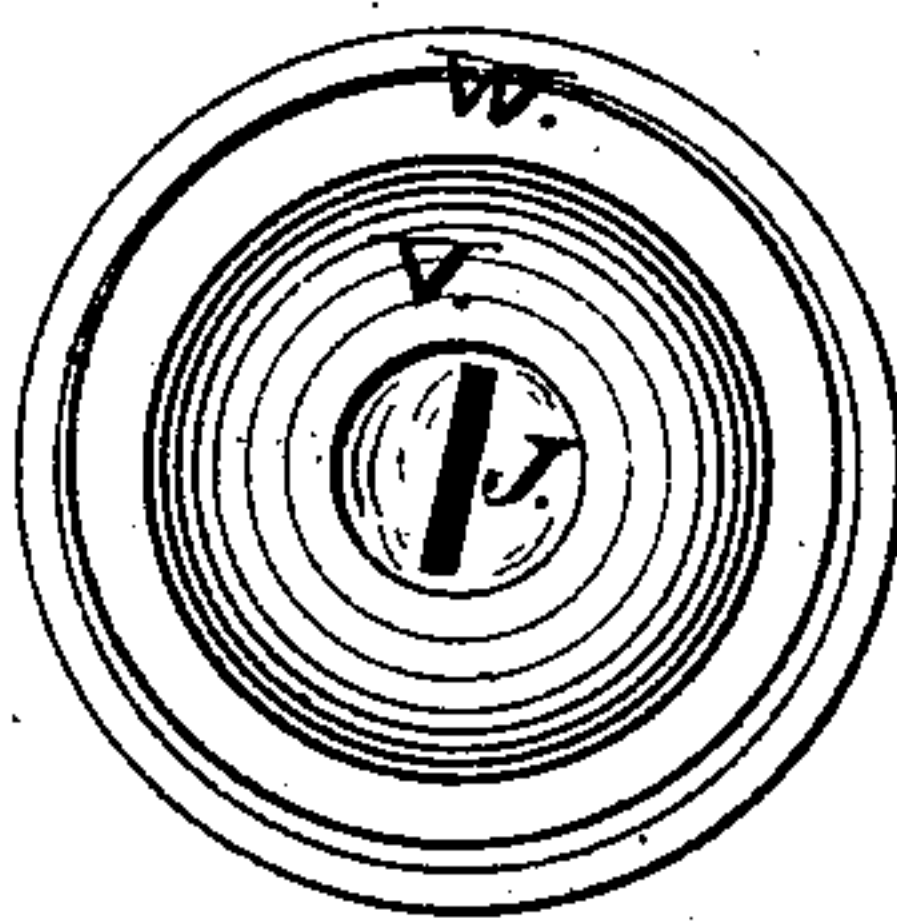


Fig. 7.

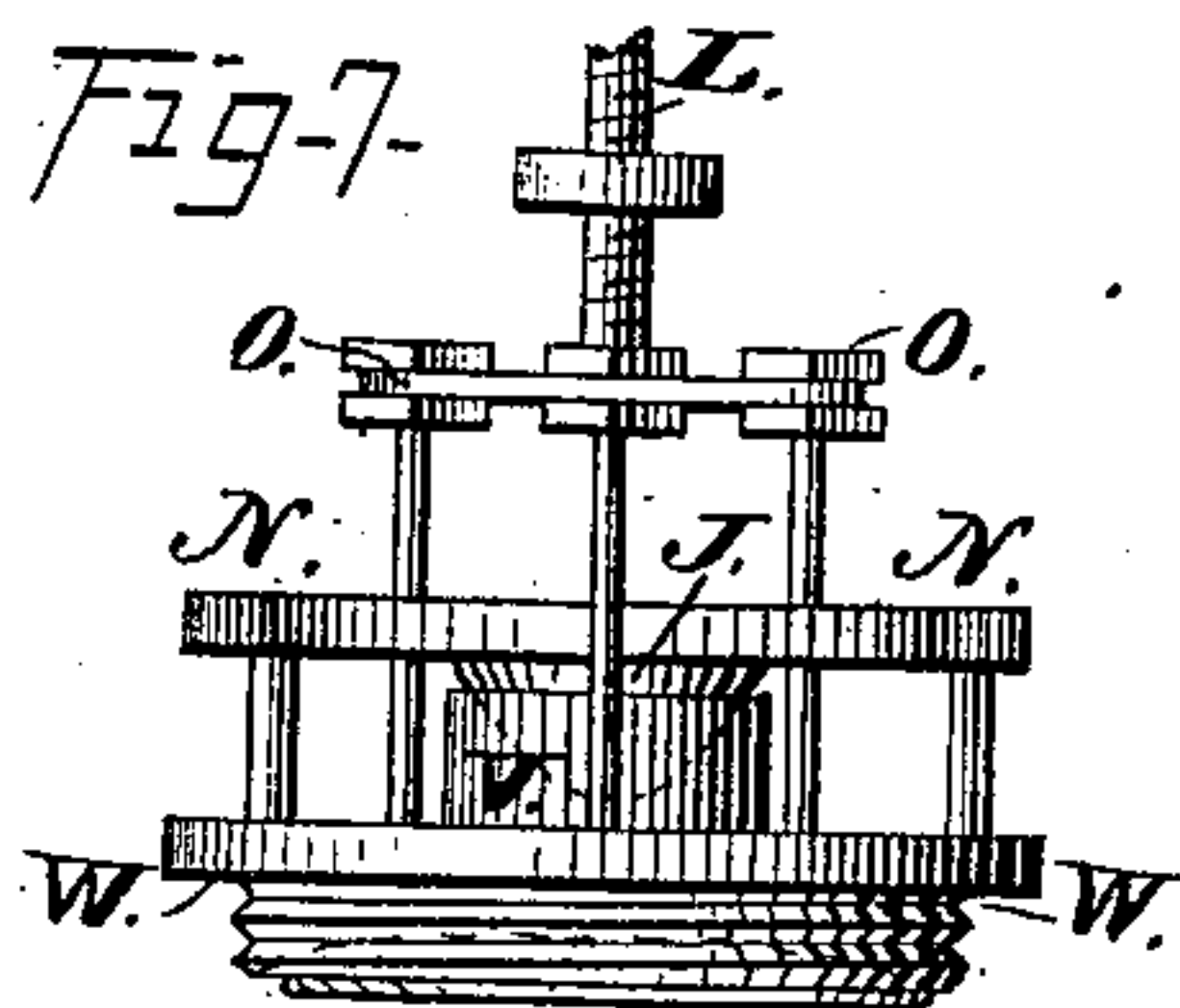
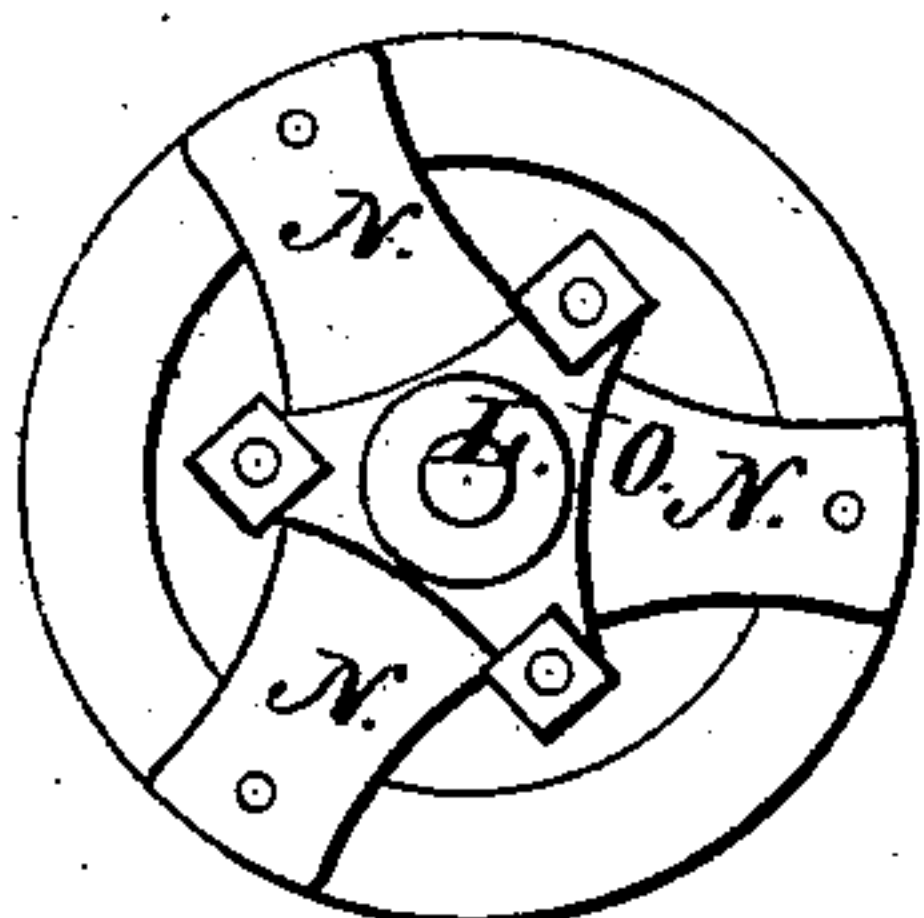


Fig. 5.



WITNESSES=  
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INVENTOR.  
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# UNITED STATES PATENT OFFICE.

LLEWELLYN P. BLAIR, OF WILMINGTON, DELAWARE, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO WILLIAM D. DOWE, OF SAME PLACE.

## GAS-GOVERNOR.

SPECIFICATION forming part of Letters Patent No. 226,479, dated April 13, 1880.

Application filed February 11, 1880.

*To all whom it may concern:*

Be it known that I, LLEWELLYN P. BLAIR, 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 hereby 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 letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is the outside elevation; Fig. 2, plan view with lid removed; Fig. 3, vertical sectional view; Fig. 4, vertical section of the valve; Fig. 5, top view of lower valve-seat and support for upper valve-seat; Fig. 6, bottom view of valve and seats; Fig. 7, elevation of valve without its seat.

A is the lid; B, the casing; E, gas-inlet; D, drip; C, gas-outlet; F, diaphragm; G, the ring around which the lid A fits; H H, screws which fasten the diaphragm and ring to casing B; V, double-seated balance-valve; J, the upper valve-seat, (see Fig. 7,) provided with a screw to regulate the opening of the valve V, thereby forming a leak-passage to prevent the flow of gas from being shut off when the cock at the burner is suddenly turned, and it also fastens the valve-seat to its support, and by this screw the valve is adjusted as necessity may require; K, a hollow cylinder to which the valve-seat W is attached; L, the valve-stem; M, the air-inlet; N, the support for valve-seat J; O O O, attachments for stem; S, inverted conical chamber; T, conical chamber; V, double valve with passage through its center; W, lower valve-seat; X, a disk fitted to L, so as to be a collar for the diaphragm F.

The lid A fits around the ring G and rests upon the outer edge of the diaphragm and the casing B.

The object of my invention is to control and equalize the pressure of the gas, so that the proper pressure shall be maintained constant at the burners; to secure the most economical consumption of gas and most satisfactory illumination; to provide a gas-gov-

ernor that shall be more sensitive and accurate, and less liable to be injured or get out of order and become useless.

My device secures these advantages by means of a double-seated balance-valve acting conjointly with the diaphragm F, as it is acted upon by the pressure of the atmosphere and by the gas passing through the governor from the meter on its way to the burners.

The inverted conical chamber S is combined with its corresponding conical chamber T and diaphragm, all attached at their centers to the stem L, to balance or regulate the movement of all these parts, so that their line of action shall be vertical, and that the stem L may be always vertical.

The screw that holds the valve-seat J to its place is a regulator of the valve V.

My device is so constructed as to be made air and gas tight whenever the instrument is inflated with gas, and the slightest quantity of gas passing through the gas-pipe to the burners will have an instantaneous and perceptible effect upon the instrument.

I claim—

1. The double-seated balance-valve V, having a passage-way through its center, in combination with the diaphragm, operating as described, for the purpose specified.

2. In a gas-regulator, the combination of the ring G, diaphragm F, the lower casing, B, and lid A, the ring so arranged as to fasten the diaphragm and hold the lid, substantially as shown and described.

3. In a gas-regulator, the combination of casing B, having the inlet and outlet, the cylinder K, having the lower valve-seat and supporting the upper valve-seat, the double-seated balance-valve, and the diaphragm F, all fitted and arranged as shown and described.

4. In a gas-regulator, the double-seated balance-valve, the upper seat being capable of adjustment, in combination with the diaphragm, all constructed as shown, and for the purpose described.

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

L. P. BLAIR.

Witnesses:

JAS. E. HUTCHINSON,  
HENRY C. HAZARD.