H. Logue,

Gas Meter,

No. 24,263. Patented May 31, 1859.

Fig. 2.

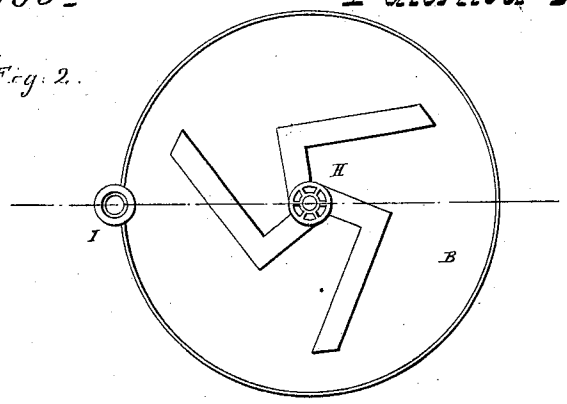


Fig. 1.

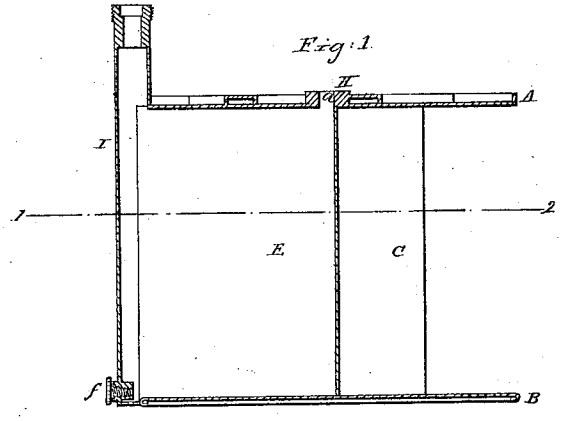
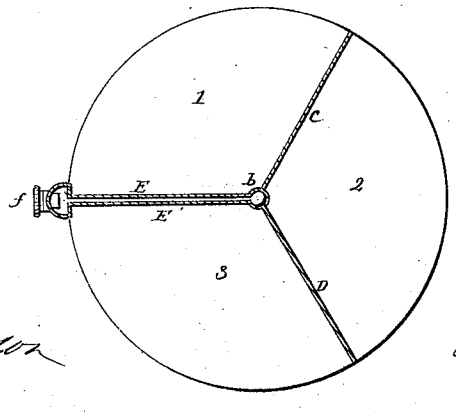


Fig. 3.



Witnesses;

Henry Howson

Horace See

Inventor:

Hugh Logue

UNITED STATES PATENT OFFICE.

HUGH LOGUE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND DANIEL P. VANDERGRIFT, OF SAME PLACE.

IMPROVEMENT IN DRY GAS-METERS.

Specification forming part of Letters Patent No. **24,263**, dated May 31, 1859.

To all whom it may concern:

Be it known that I, HUGH LOGUE, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Dry Gas-Meters; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to an improvement in the construction of that class of dry gas-meters in which chambers with yielding diaphragms are used, the said diaphragms being arranged to operate a rotating valve; and my improvement consists in constructing one of the partitions between two of the chambers that it may afford a passage for the gas from the inlet-pipe to the central opening of the valve seat, substantially as hereinafter set forth, thereby avoiding the complicated chambers and passages used in ordinary dry gas-meters for the same purpose. My improvement also affords a ready means of drawing off the water, which is apt to collect in and interfere with the working of the meter.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a sectional elevation of the frame or "skeleton" of a dry gas-meter, illustrating my improvement. Fig. 2 is a top view, and Fig. 3 a sectional plan on the line 1 2, Fig. 1.

Similar letters refer to similar parts throughout the several views.

A is the top and B the bottom plate of the frame or skeleton of a dry gas-meter. These plates are connected together by the vertical plates C, D, E, and E′, the two latter plates being situated so closely together that a space of one-eighth of an inch or thereabout shall intervene between them, the remaining plates or partitions C and D being so arranged as regards each other and the two plates E and E′ as to divide the skeleton into three compartments—1, 2, and 3—of equal capacity.

H is the valve-seat, having a central opening, *a*, which communicates with the tube *b*, the latter being situated in the center of the skeleton at the point where the partitions meet. This tube communicates with the space between the two plates E and E′, and this throughout the whole depth of the skeleton.

The three compartments 1, 2, and 3 are furnished with the ordinary yielding diaphragms, and the entire skeleton is surrounded with a casing, so that each compartment is divided into two chambers—one chamber on the inside of the diaphragm and the other between the diaphragm and the outer casing.

On the top of the upper plate, A, is another chamber, technically termed the "gallery," which receives the measured gas prior to its escape through the delivery-pipe to the burners.

The above-described parts, with the exception of the double partition formed by the two plates E and E′, are similar to those of ordinary dry gas-meters in common use. The valve-seat and its valve, together with the inlets and outlets from the chambers, are also of the ordinary construction and arrangement, the valve being operated from the diaphragms by a system of rods and levers, too well known by those engaged in the construction of this class of meters to need minute description or illustration.

I is the inlet-pipe secured to the outer casing and so arranged as to communicate with the space between the partition-plates E and E′, the point of communication between the pipe and this space extending the whole depth of the partition. Near the bottom of the pipe is a screw-plug, F, on removing which the water collected in the space between the two plates may be allowed to escape.

In the ordinary dry gas-meters the gas passes from the inlet-pipe to the central opening of the valve-seat through a passage into a chamber formed in one of the compartments, and this chamber communicates with the central opening of the valve-seat.

In order to allow for the free working of the diaphragm the chamber must be of a peculiar construction, involving considerable expense, owing to the difficulty and delay which its construction demands.

It is to avoid the complication of the ordinary communication between the inlet-pipe and center opening for which my improvement has been especially designed, and it will be

readily seen that this end has been fully accomplished by making one of the partitions between two of the chambers double and forming a space between the plates of that partition for the transmission of gas. At the same time this space affords a reservoir for the water, which is apt to collect in and interfere with the proper movements of the meter, the water being readily drawn off at any time by the removing of the screw-plug F.

I claim and desire to secure by Letters Patent—

So constructing one of the partitions between two of the chambers of a dry gas-meter that it may afford a passage for the gas from the inlet-pipe to the central opening of the valve-seat, substantially as and for the purpose set forth.

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

HUGH LOGUE.

Witnesses:
HENRY HOWSON,
CHARLES D. FREEMAN.