

R. BRIGGS.

Center-Valve for Gas Purifiers.

No. 163,569.

FIG. 1.

Patented May 25, 1875.

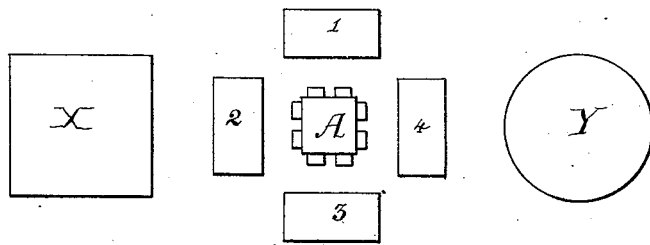


FIG. 2.

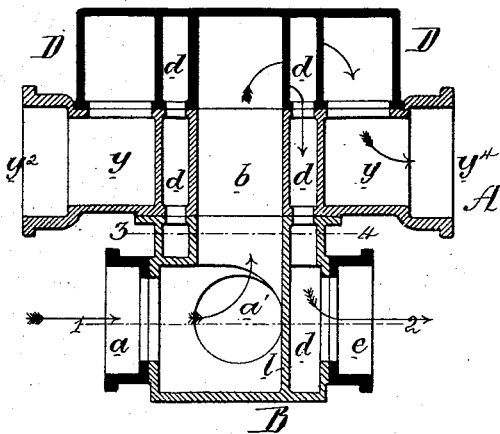


FIG. 3.

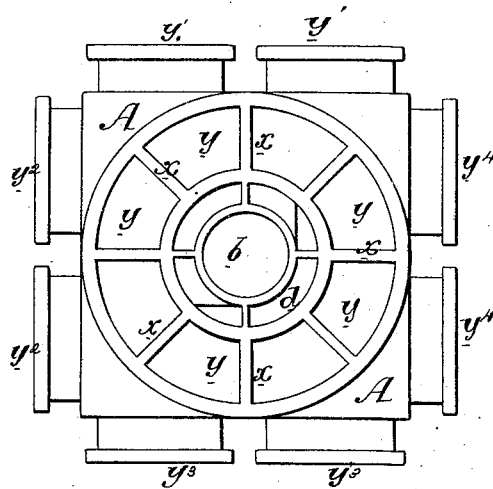


FIG. 4.

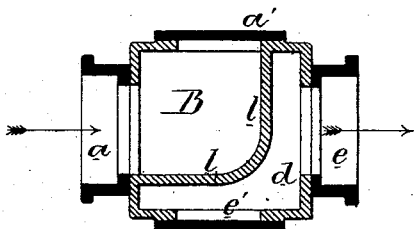
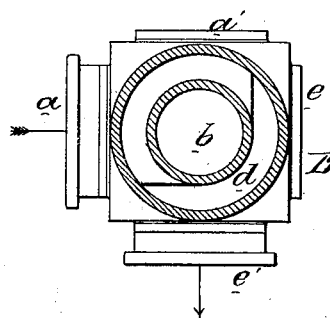


FIG. 5.



Witnesses,

Thomas McSwain
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UNITED STATES PATENT OFFICE.

ROBERT BRIGGS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN CENTER-VALVES FOR GAS-PURIFIERS.

Specification forming part of Letters Patent No. 163,569, dated May 25, 1875; application filed October 12, 1874.

To all whom it may concern:

Be it known that I, ROBERT BRIGGS, of Philadelphia, Pennsylvania, have invented certain Improvements in the Construction of Center-Valves for Gas-Purifiers, of which the following is a specification:

The object of my invention is to dispense with the separate castings heretofore considered necessary in making connections at different angles with the center-valve of a system of gas-purifiers; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawings, in which—

Figure 1 is a diagram illustrating the application of my improvement; Fig. 2, a vertical section of the center-valve; Fig. 3, a plan view of the same; Fig. 4, a sectional plan on the line 1 2; and Fig. 5, a sectional plan on the line 3 4, Fig. 2.

The diagram, Fig. 1, will serve to impart a ready understanding of the object of my improvement.

It is usual to convey the gas from the retort-house X to a center-valve, A, which causes the gas to pass alternately through a system of purifiers, 1 2 3 4, and to be finally discharged into a pipe communicating with the gasometer Y.

In practice, the inlet and outlet openings of the center-valve have sometimes to be arranged in line, and at other times at right angles to each other. Thus, if the gas is being discharged into the gasometer Y, (shown by full lines in Fig. 1,) the inlet and outlet openings of the center-valve will be in line; but if the gasometer is in the position shown by dotted lines, the said openings must be at right angles.

Heretofore it has been the custom to employ a special casting in each of these cases, and it is the object of my invention to avoid this.

On referring to Figs. 2, 3, 4, and 5, A represents a center-valve, the upper portion of which is constructed in the usual manner, my improvements being restricted to the lower chamber B. The interior of the upper portion A of the valve has a number of partitions, *x*, which inclose spaces *y*, communicating with pipe-openings *y*¹, *y*², *y*³, and *y*⁴, which communicate with the purifiers. The valve has also a central passage, *b*, and an annular passage, *d*, surrounding the said passage *b*, for a purpose described hereafter.

By the adjustment of a partitioned cover, D, on the valve the gas is caused to pass to the purifiers in a manner too well known to those skilled in the construction of gas apparatus to need description.

The chamber B of the valve has four openings, *a a'* and *e e'*, the openings *a e* being exposed in the present instance, and the openings *a' e'* closed by any of the ordinary appliances.

A vertical partition, *l*, (best observed in Figs. 2 and 4,) separates the chamber B into two apartments, with one of which communicate the openings *a, a'*, and *b*, while with the other communicate the openings *e, e'*, and *d*.

The gas, in the present instance, enters the opening *a* of the chamber B, and passes up through the opening *b* into the portion A of the valve, by which it is distributed alternately to the purifiers, in the usual manner, and, on returning from the last purifier of the series, passes downward through the annular passage *d*, and out through the opening *e*, which communicates with the gasometer.

When the openings are arranged as thus described, and as shown in Fig. 4, the connections will be made in a straight line, and the gas will be discharged into the gasometer shown in full lines in the diagram, Fig. 1; but if the gas has to be discharged into a gasometer located in the position shown by dotted lines in said figure, the opening *e* is closed and communication opened between the opening *e'* and the gasometer, as shown in Fig. 5—an operation which will demand very little labor, and no change whatever in the position of the chamber B.

The openings which are closed with flanges, as described, may be used as hand-holes for obtaining access to the interior of the chamber B.

I claim as my invention—

A center-valve for gas-purifiers, the lower chamber B of which is provided with openings *a a'* and *e e'*, and a partition, *l*, so that the course of the gas through the said center-valve may be changed at pleasure, all substantially as set forth.

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

ROBT. BRIGGS.

Witnesses:

HUBERT HOWSON,
HARRY SMITH.