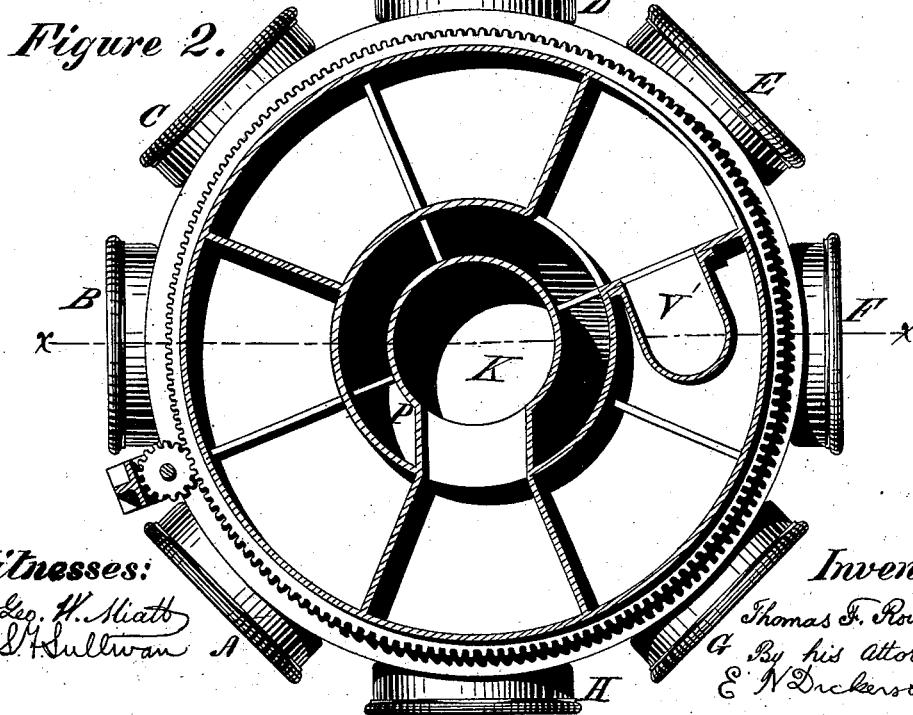
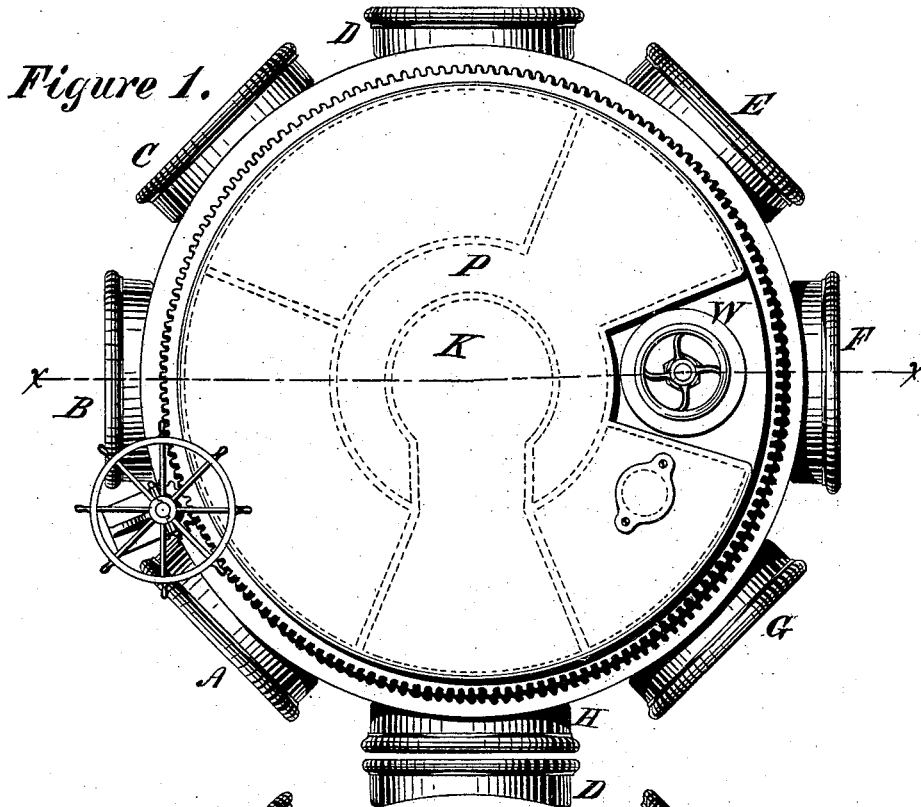


T. F. ROWLAND.
Center-Seal Purge-Valve.

No. 211,590.

Patented Jan. 21, 1879.



Witnesses:
 Geo. H. Miatt
 S. Sullivan A

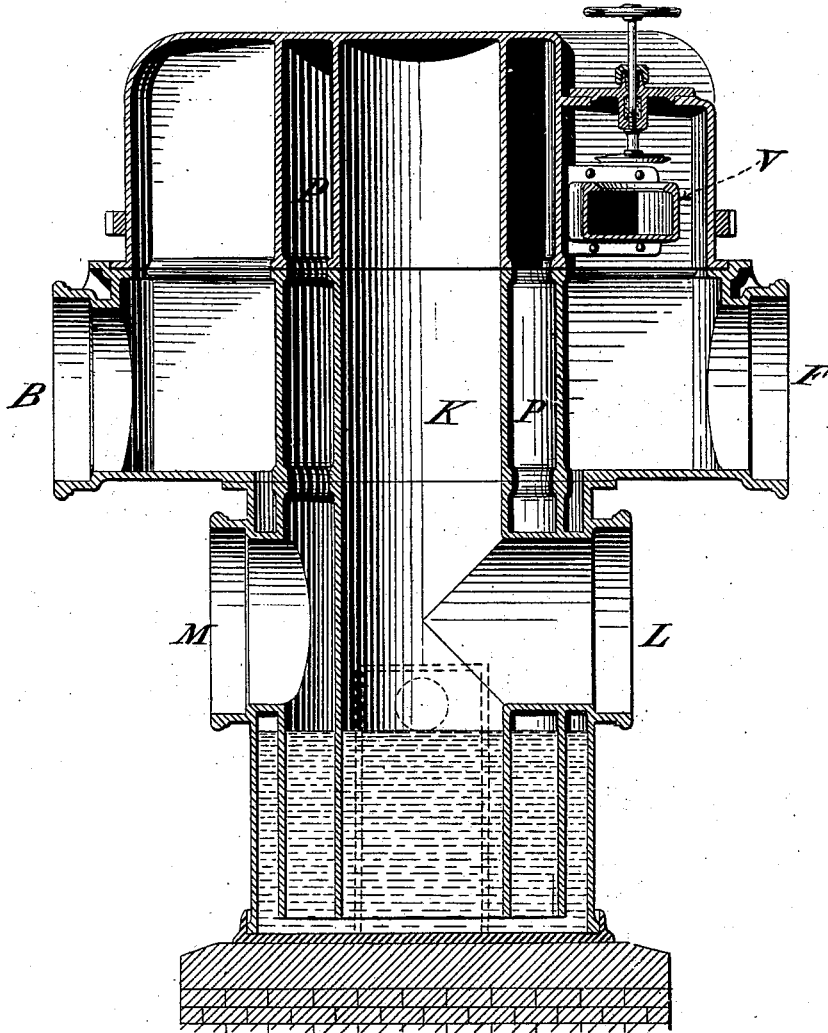
Inventor:
 Thomas F. Rowland
 G. By his Attorney
 E. N. Dickerson G

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Figure 3.



Witnesses:

Geo. H. Miatt
J. J. Sullivan

Inventor:

Thomas F. Rowland
By his Attorney
E. N. Dickerson & Co.

UNITED STATES PATENT OFFICE.

THOMAS F. ROWLAND, OF NEW YORK, N. Y.

IMPROVEMENT IN CENTER-SEAL PURGE-VALVES.

Specification forming part of Letters Patent No. **211,590**, dated January 21, 1879; application filed August 29, 1878.

To all whom it may concern:

Be it known that I, THOMAS FITCH ROWLAND, of the city, county, and State of New York, have invented a new and useful Improvement in Center-Seal Purge-Valves, of which the following is a full, true, and exact description, reference being had to the accompanying drawings.

My invention relates to an improvement in what are known as the "center-seals" of gas-works.

A center-seal is an apparatus by means of which the gas flowing from the generators is distributed to the purifiers to be cleansed by passing through boxes filled with suitable cleansing substances, and by means of which the gas is shut off from any one of the purifying-boxes. Ordinarily the gas passes through a series of such boxes, and the center-seal is the apparatus by means of which the gas is forced to enter and pass through each one of these boxes in succession. By means of it, also, the cleansing and renewal of any one of the boxes can be accomplished. In a center-seal controlling four boxes, for instance, the gas passes through three of them only, the fourth one being disconnected and separated from the flow of the gas, so that it can be opened and its contents renewed. After this box has been so renewed it is, of course, filled with air, and should gas enter it and mingle with the air contained therein it is plain that an explosive mixture would be formed.

The object of my invention is to render easy and certain the removal of this air before the introduction of the following gas. This I do by attaching to the movable part of the center-seal a purge-valve, so arranged as to cleanse and purge the box which has just been renewed, and is filled with air before the gas is allowed to pass through it to the holder.

My invention will be clearly understood from the accompanying drawings, which represent the usual form of center-seal with my improvement attached thereto.

Figure 1 represents a top view of a center-seal; Fig. 2, a horizontal section through the same; Fig. 3, a section through Figs. 1 and 2 on the line X X.

I will not here describe the center-seal, which is well known, but only my improvement.

Gas enters the center-seal through the central pipe, K, passes thence through pipe H, pipe A, through center-seal pipe B to pipe C, through the center-seal pipe D to pipe E, and thence escapes through the annular space P and pipe M to the gas-holder. The cleansing-boxes are intermediate between the pipes H and A, B and C, D and E, and F and G. As shown, the box between the pipes F and G is cut off. Each of the boxes is provided with a vent or escape.

Now, if the box between F and G were full of air after the contents of such box had been renewed, and the center-seal were turned so that the gas would pass through such box and to the holder, it is plain that an explosion might ensue. I have therefore provided the valve V, Fig. 3, which is supported in the case V', Fig. 2, controlled by the hand-wheel W, Fig. 1. When this valve is open gas enters by the pipe E, passes through such valve to the pipe F, and through the box connected with it. If the escape-valve connected with the box be then opened, the entering gas will drive out before it all the air, and will fill the box with the gas flowing from the generator. As soon as this is the case, which can be known by the flame, the valve V is closed, the center-seal is turned, and the gas flows regularly through the pipes to F and G, and the box between the pipes H and A is cut out.

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

1. In combination with the center-seal of gas-works, a movable purge-valve, which is brought in connection with each of the purifying-boxes, and serves to purify such boxes of the contained air, substantially as described.

2. In combination with the closed section of a revolving center-seal, a valve, V, which serves to connect such closed section with the gas-outflow conduit, whereby said gas is admitted to a box previously filled with air before the center-seal is turned, and said box is brought into connection with the current of gas continually passing the apparatus, substantially as described.

THOS. F. ROWLAND.

Witnesses:

S. F. SULLIVAN,
WM. J. SAWYER.