

No. 629,739.

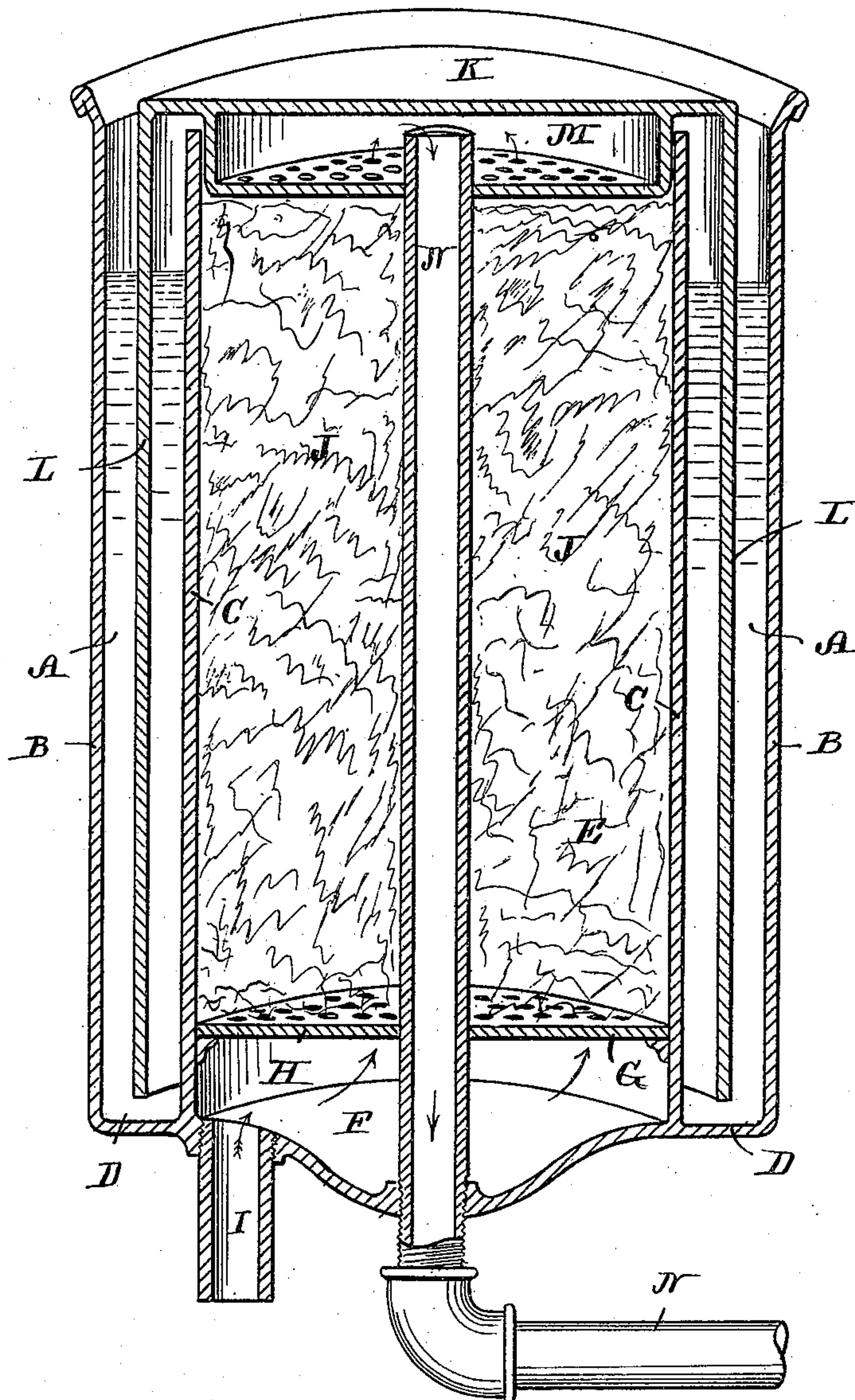
Patented July 25, 1899.

W. J. BAULIEU.

GAS PURIFIER.

(Application filed Dec. 19, 1898.)

(No Model.)



Witnesses.

Charles W. Spooner.
Edward K. Nicholson

Inventor.

William J. Baulieu

By

Chamberlain & Newman

Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM J. BAULIEU, OF BRIDGEPORT, CONNECTICUT.

GAS-PURIFIER.

SPECIFICATION forming part of Letters Patent No. 629,739, dated July 25, 1899.

Application filed December 19, 1898. Serial No. 699,638. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. BAULIEU, a citizen of the United States, and a resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Gas-Purifiers, of which the following is a specification.

This invention relates to new and useful improvements in gas-purifiers, and is more particularly adapted for use in connection with acetylene-gas machines such as are now commonly used for illuminating purposes.

In the use of acetylene-gas machines I find that the gas burners, pipes, &c., will invariably clog and choke up after comparatively short usage owing to the great amount of substances which are carried from the carbide-generators either mechanically or otherwise. These substances consist principally of lime, largely of carbide, iron, and crystal formations. A number of devices have been incorporated in the construction of gas-machines for cleaning the gas; but they are all more or less defective in that they do not properly and sufficiently purify the gas in a manner which will thoroughly prevent the objections sought to be overcome by this invention.

It is therefore the object of my present invention to provide a device which may be attached to a gas-machine or to the service-pipe leading therefrom whereby the mineral substances are retarded and separated from the gas and the latter allowed to freely pass on to the burners.

With the above objects in view my invention resides and consists in the novel construction and combination of parts set forth in the accompanying drawing, forming a part of this specification, and wherein a central sectional perspective view of my separator is shown ready for operation.

Referring to the characters of reference marked upon the drawing, A indicates a tank, which is preferably of cylindrical shape, having an outer wall B and an inner wall C, an open top, and a closed bottom D. The interior of this cylindrical tank forms a packing-chamber E and is provided with a solid bottom F and a false or perforated bottom G, thus leaving an intermediate chamber H.

I indicates an inlet-pipe which serves as a means for connecting the purifier to the ma-

chine or to the service-pipes leading from said machine.

The interior of the cylinder in practice is packed with suitable permeable material J—such as cotton, wool, or the like—which packing permits of the free passage of gas there-through, but retards and prevents the passage of any and all substances, either in lumps or dust form, and thereby insures the desired separation of the gas and dust.

The permeable packing material above referred to is replaced from time to time as it becomes filled with the substances mentioned and its chamber cleaned, after which the perforated bottom can also be detached and the intermediate chamber likewise cleaned, when the parts can again be replaced and a new packing inserted.

The cover K is of special construction and comprises a deep exterior depending flange L, which in practice extends down into the cylindrical tank and is partially submerged in a body of water contained therein, which water forms a seal and prevents the escape of any gas from the purifier. Upon the under side of the cover is formed a chamber M, the side walls of which snugly engage the inner walls of the cylinder, and the bottom of said chamber is perforated similar to that of the bottom G. In practice this perforated bottom rests snugly upon the packing and holds it in place. An exit-pipe N extends from said chamber and serves to lead the purified gas therefrom out of the machine for use.

It will be obvious, of course, that with an excessive pressure of gas within the purifier the cover will yield or raise, and thereby relieve the strain brought to bear, and, further, that with the first passage of gas said pressure will be quickly relieved, whereupon the cover will assume its normal position. It is also apparent that the gas enters the pipe I at the bottom and gradually works up through the perforated disks and the permeable packing material and finally emerges into the chamber M, from which it is fed to the burners through the exit-pipe N.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a gas-purifier of the class described, the combination with an internal packing-

chamber having an exterior cylindrical water-jacket, of a cover having depending flanges extending into said water-jacket, a gas-receiving chamber formed on said cover and
5 having a perforated bottom, a feed-pipe discharging into said receiving-chamber, an intermediate chamber below the packing, and a discharge-pipe, substantially as described.

2. The combination in a gas-purifier, of a
10 cylindrical water-tank, an internal packing-chamber, an expansible cover fitted into said water-tank and having a central depending

receiving-chamber formed integral therewith and fitting into the packing-chamber, a detachable perforated bottom to said packing-
15 chamber, an intermediate chamber and exit-pipe, substantially as shown and described.

In testimony whereof I have hereunto set my hand this 10th day of December, A. D. 1898.

WILLIAM J. BAULIEU.

In presence of—

C. M. NEWMAN,

HARRIET L. PLASON.