J. C. TIFFANY.

Gas-Retort.

No. 164,058. Patented June 1, 1875.

Fig. 1.

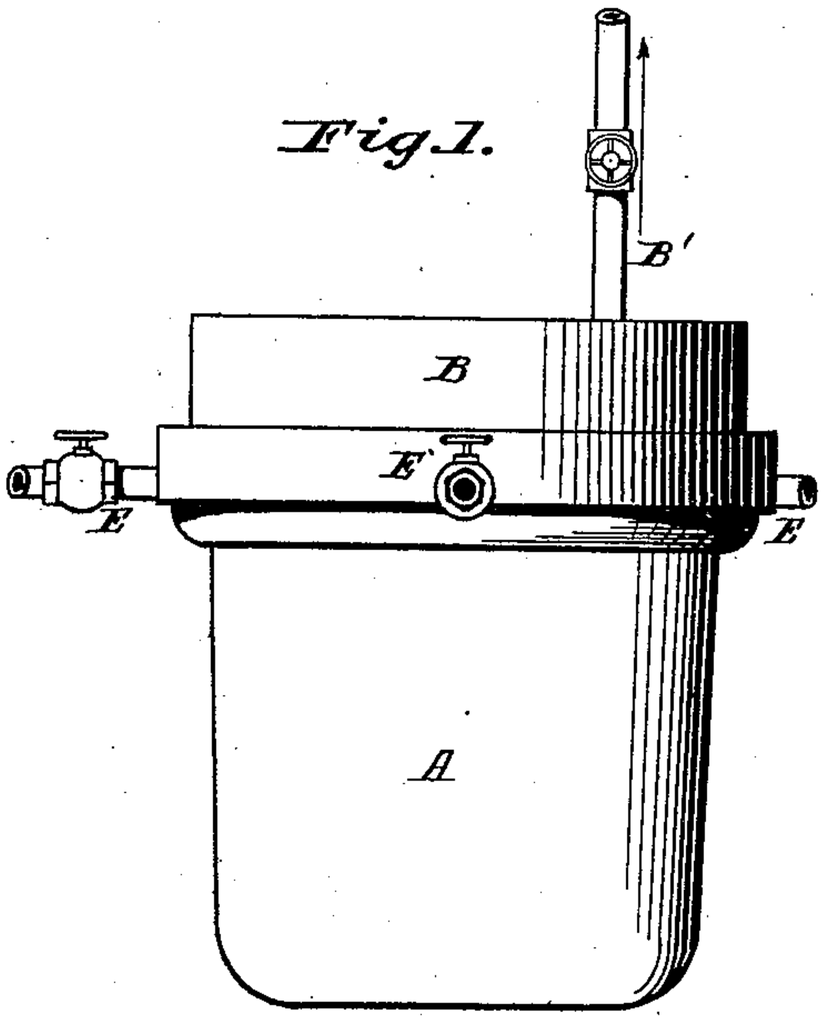


Fig. 2.

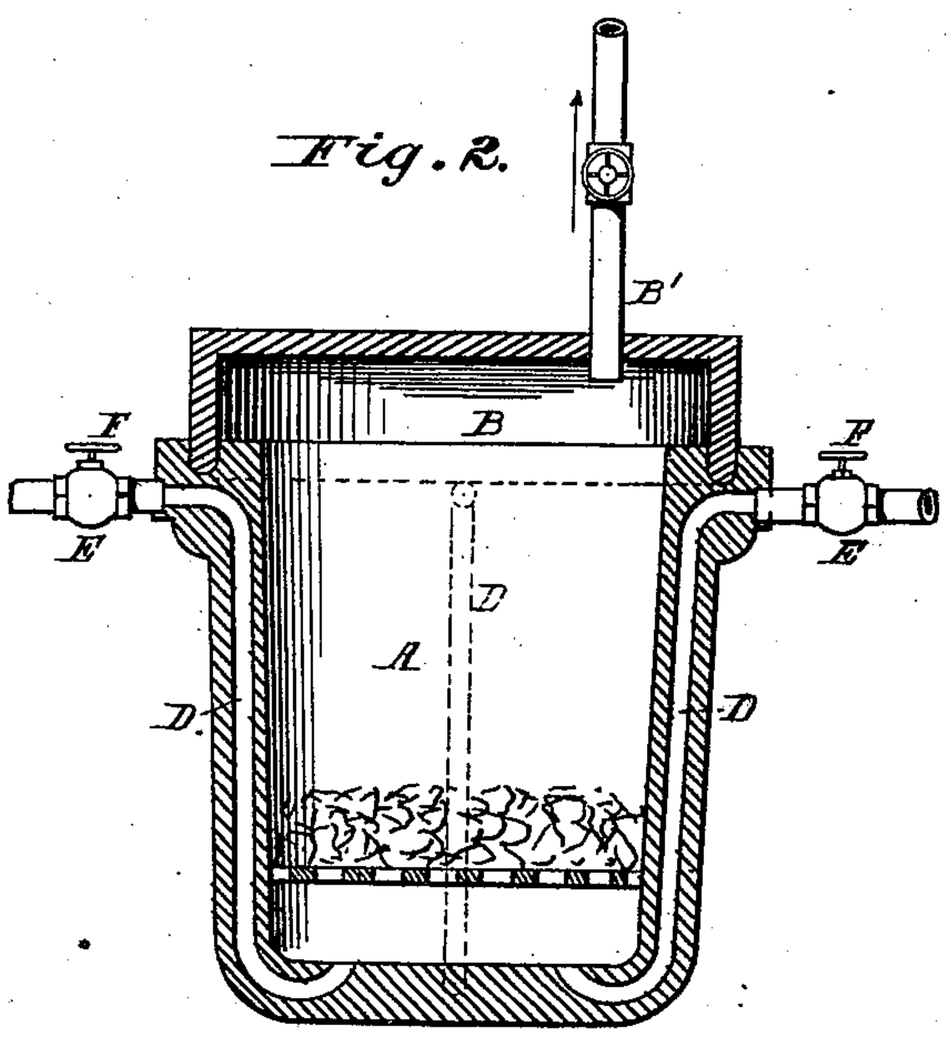


Fig. 3.

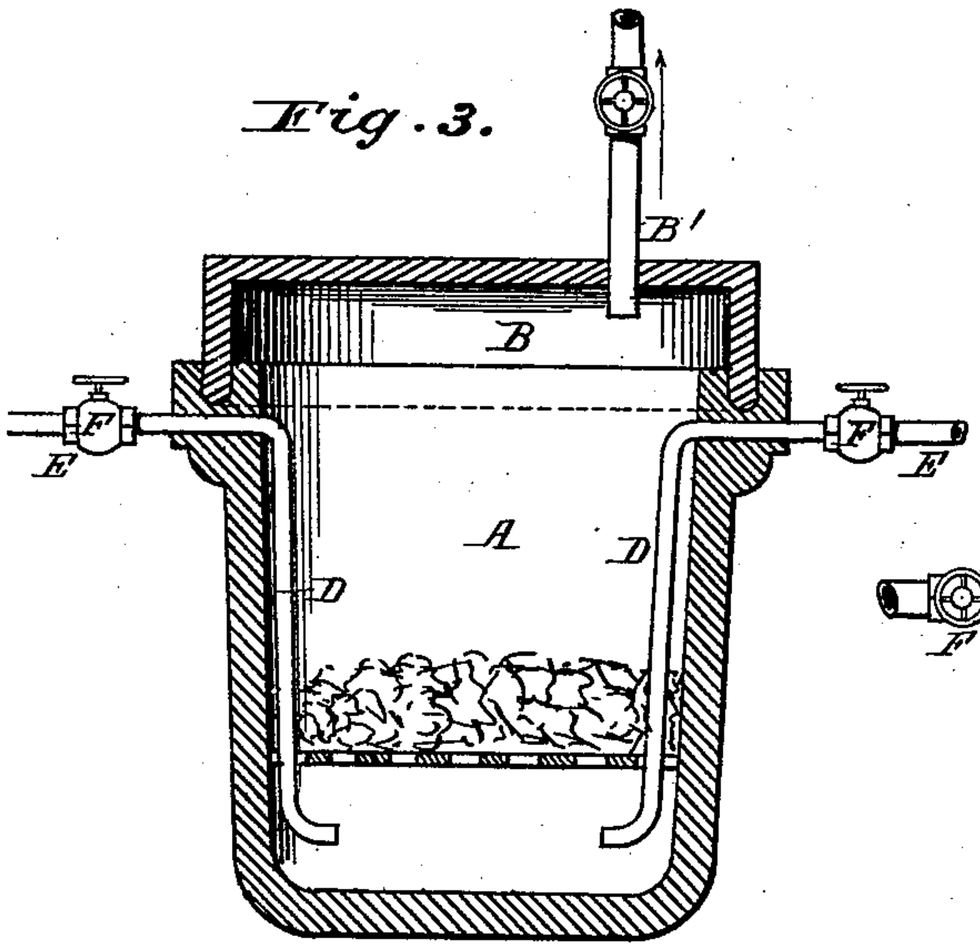
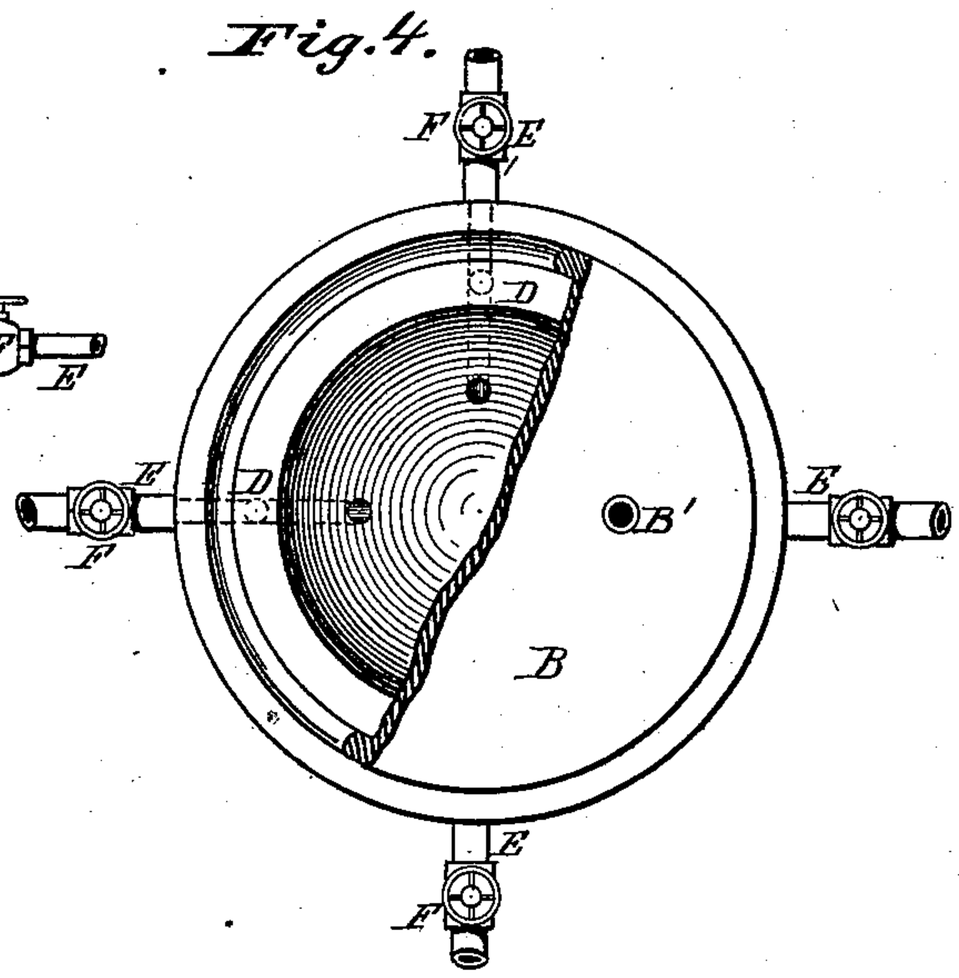


Fig. 4.



Attest:
Jos. L. Coombs
A. M. Norris

Inventor:
Joseph Capron Tiffany
By James L. Norris.
his attys

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

JOSEPH C. TIFFANY, OF PORTSMOUTH, NEW HAMPSHIRE.

IMPROVEMENT IN GAS-RETORTS.

Specification forming part of Letters Patent No. **164,058**, dated June 1, 1875; application filed May 13, 1875.

To all whom it may concern:

Be it known that I, JOSEPH CAPRON TIFFANY, of Portsmouth, in the county of Rockingham and State of New Hampshire, have invented certain new and useful Improvements in Retorts for Manufacturing Illuminating and Heating Gas, of which the following is a specification:

This invention relates to certain improvements in an apparatus for the manufacture of gas for heating and illuminating purposes from the various liquid and liquefiable hydrocarbons, such as petroleum, rosin, &c., its object being to provide for the thorough and complete decomposition of the same, and prevent the deposition of tar and solid hydrocarbon in the retorts and pipes. Unless thoroughly and uniformly distributed on the bottom of the retort the hydrocarbon will be overheated, causing a deposit of solid carbon, a serious obstacle in the manufacture of gas from the class of substances enumerated.

My invention is designed principally to be applied to the ordinary pot-retorts, and is intended particularly to be employed in connection with the improved stove or furnace described in the Letters Patent granted to me November 26, 1872, although it may be applied to other forms of retorts and used with advantage in connection with various forms of furnaces or heaters.

My invention consists in a retort provided with a series of passages formed in its shell or body, extending from the top thereof to the bottom, where they terminate at various points around the same, through which the hydrocarbon alone or hydrocarbon and steam are simultaneously admitted and uniformly distributed over the bottom or heating surfaces, as hereinafter fully set forth.

In the drawings, Figure 1 represents an elevation of a retort, showing my invention; Fig. 2, a vertical section through the same. Fig. 3 represents an ordinary pot-retort with my invention applied to the same, and Fig. 4 a top view of the retort with a portion of the cover removed.

Referring to the drawings, the letter A represents the retort provided with a removable cover, B, and a grate or perforated false bottom, C, near its bottom for supporting the carbon usually employed. Through the top B extends the exit or escape pipe B^1, through which the gas is conducted to the gasometer. D D D represent a series of passages formed in the shell or body of the retort, and extending from the hydrocarbon supply-pipes E, provided with suitable regulating-cocks F, down into the retort, terminating at various points around the bottom of the same, through which the hydrocarbon is admitted to the same and distributed over its heating-surfaces.

It will be seen that, as thus constructed, the hydrocarbon will be admitted all around the bottom of the retort, and will be uniformly distributed over the heating-surface of the same, any inclination of the retort not affecting the distribution of the hydrocarbon, which is compelled to follow the tubes and spread over the entire surface of the bottom. In order to more thoroughly insure the distribution of the hydrocarbon, and assist in preventing the deposition of solid carbon, as well as increase the yield of gas, steam may be admitted along with the hydrocarbon through the passages D by connecting the supply-pipes E with any suitable steam-generator. The steam projects the hydrocarbon into the retort, and is superheated on coming in contact with the hot bottom of the same. It then passes with the decomposed hydrocarbon through the incandescent carbon above, where it is decomposed, forming carbonic oxide, and liberating hydrogen gas, which pass over to the gasometer with the hydrocarbon gas.

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

A gas-retort provided with a series of passages, formed in its shell or body, extending from the the top thereof where they are connected with suitable supply-pipes, to the bottom where they terminate at various points around the same, for the purpose of feeding and distributing the oil evenly over the heating-surface of the retort, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand.

JOSEPH CAPRON TIFFANY.

Witnesses:

JAMES L. NORRIS,

A. H. NORRIS.