A. W. M. MAAS.

GAS-RETORTS.

No. 193,979. Patented Aug. 7, 1877.

Fig. 1.

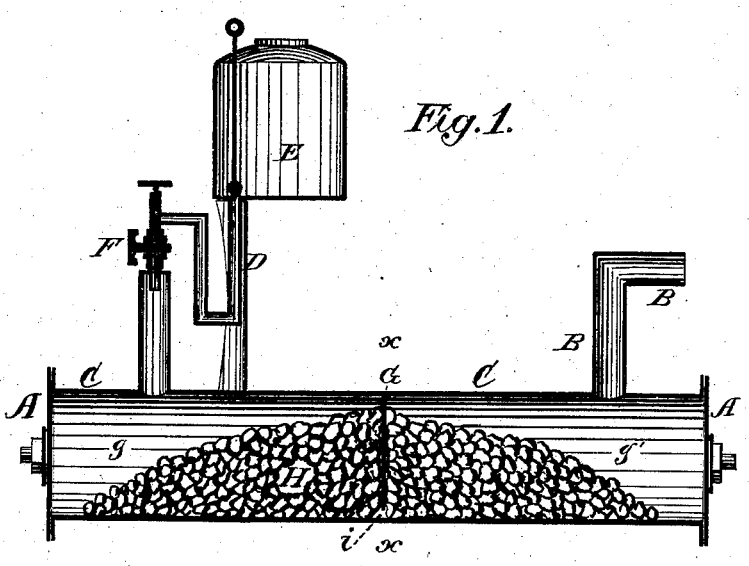


Fig. 3.

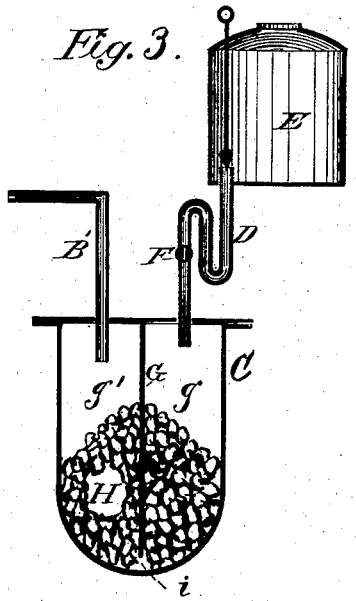
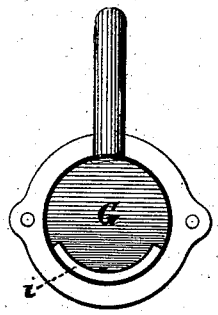


Fig. 2.



Attest:

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Attys.

UNITED STATES PATENT OFFICE.

ALBERT W. M. MAAS, OF MOBILE, ALABAMA, ASSIGNOR OF TWO-THIRDS HIS RIGHT TO ELISHA B. LOTT, OF SAME PLACE, AND WM. H. HARDY, OF MERIDIAN, MISSISSIPPI.

IMPROVEMENT IN GAS-RETORTS.

Specification forming part of Letters Patent No. **193,979**, dated August 7, 1877; application filed December 21, 1876.

To all whom it may concern:

Be it known that I, ALBERT W. M. MAAS, of Mobile, in the county of Mobile and State of Alabama, have invented certain new and useful Improvements in Gas-Retorts; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a longitudinal section. Fig. 2 is a vertical section through the line *x x* in Fig. 2; and Fig. 3 is a vertical section of an apparatus such as is used for the manufacture of gas on a small scale.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to that class of gas machines or retorts that are used for the manufacture of gas for illuminating or heating purposes from oils or fatty matter, tar, pitch, rosin, &c.; and it consists in an improved construction and arrangement of the parts, whereby I prevent waste of material and fuel, and produce gas quicker and of a better quality than by the retorts or machines now ordinarily in use.

In the drawing, C is a retort made of cast-iron or fire-clay, having covers A A of the usual construction. This retort is divided by a wall or plate, G, extending from its top to within a short distance of the bottom, into two sections, *g g'*, of equal or nearly equal size.

E is a reservoir, the shape of which may be varied to suit expediency, located above the retort. D is a pipe, which passes from reservoir E down to the section *g* of the retort, and is provided with a stop or gage cock, F. B is a pipe, which leads from the section *g'* of the retort to the gasometer. H represents pieces of brick, coke, or other similar material placed in the bottom of the retort, in sections *g* and *g'* both.

The operation of my improved retort is as follows: The fluid, rosin, pitch, tar, tallow, or other matter from which the gas is to be made, is placed in the reservoir E, and from there conveyed in a steady stream through the pipe D down into the section *g* of the retort, where it falls upon the pieces of brick or coke H that are kept at a bright-red heat by fire placed under the retort, and is volatilized, the vapors passing down through the filling H through the passage or channel *i* under the dividing-wall G, and into the section *g'* of the retort. They now pass up through the filling H in this section, and finally escape through pipe B into the gasometer.

I am well aware that it is not new to manufacture oil-gas, or gas from resin or fatty matter, by conducting a stream of the oil down upon glowing bricks or pieces of coke placed in a retort, and then carrying off the gases through pipes suitably arranged; and I do not, therefore, claim this process. But my improvement consists in dividing the retort into two sections by a dividing-wall, which leaves but a narrow channel or passage at the bottom of the retort, thus forcing the gases which are generated in the one section to pass through the filling in both sections before they can escape to the gasometer through the pipe arranged for this purpose upon the latter section.

I am also aware that gas-retorts have been constructed before with dividing-plates (such as shown in the patent to Smith, May 16, 1871) for the purpose of compelling the gas, as it generates, to pass through the various sections thus formed before it reaches the gasometer. More than one dividing-plate has, however, invariably been employed, which would not answer for me, because it would necessitate a number of openings or man-holes in the retort, through which the bricks or coke H might be placed in the same or removed therefrom.

My gas-retort, constructed as herein described, combines simplicity with effectiveness.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

A gas-retort, C, divided into two compartments, *g g'*, of equal size, by a plate, G, projecting downward from the top, said plate provided with a narrow opening or passage-way, *i*, at its bottom, substantially as and for the purpose herein shown and described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ALBERT WILHELM MAX MAAS.

Witnesses:
E. B. LOTT,
JAMES WOOLF.

1,500 words.