

J. GOLDTHORP.

Stove-Retorts for the Manufacture of Hydrocarbon Gas.

No. 152,626.

Patented June 30, 1874.

Fig. 1.

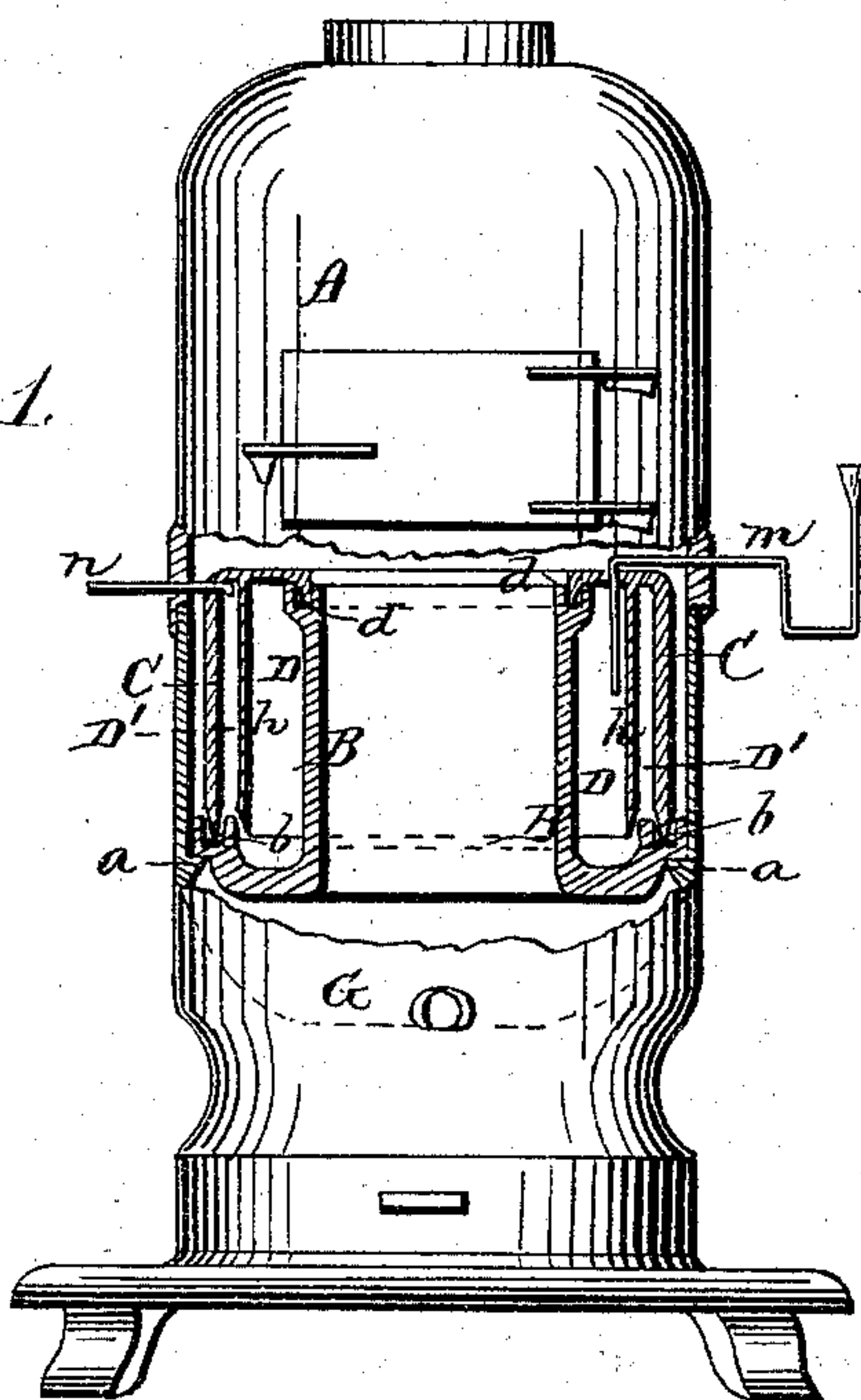


Fig. 2.

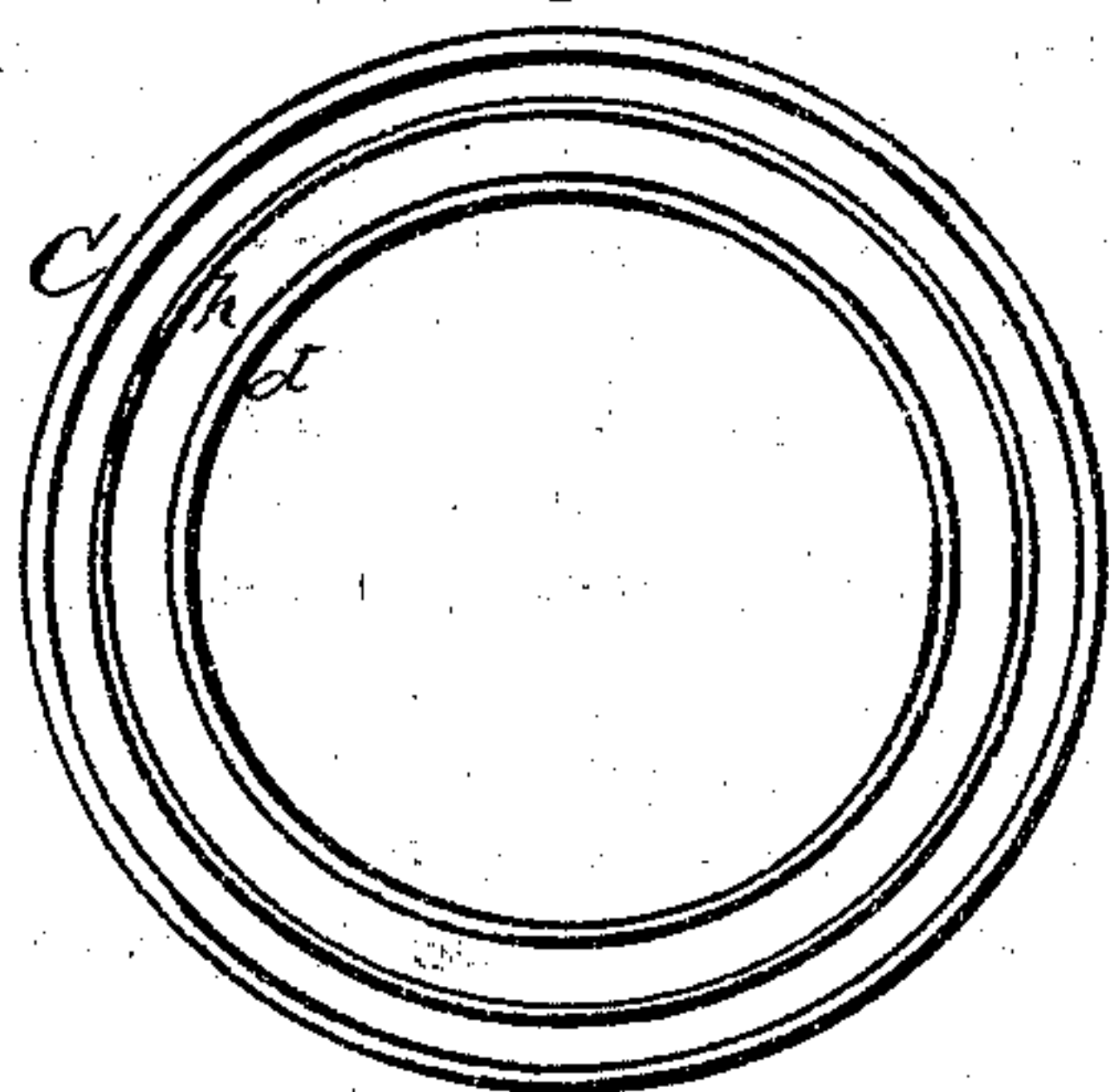
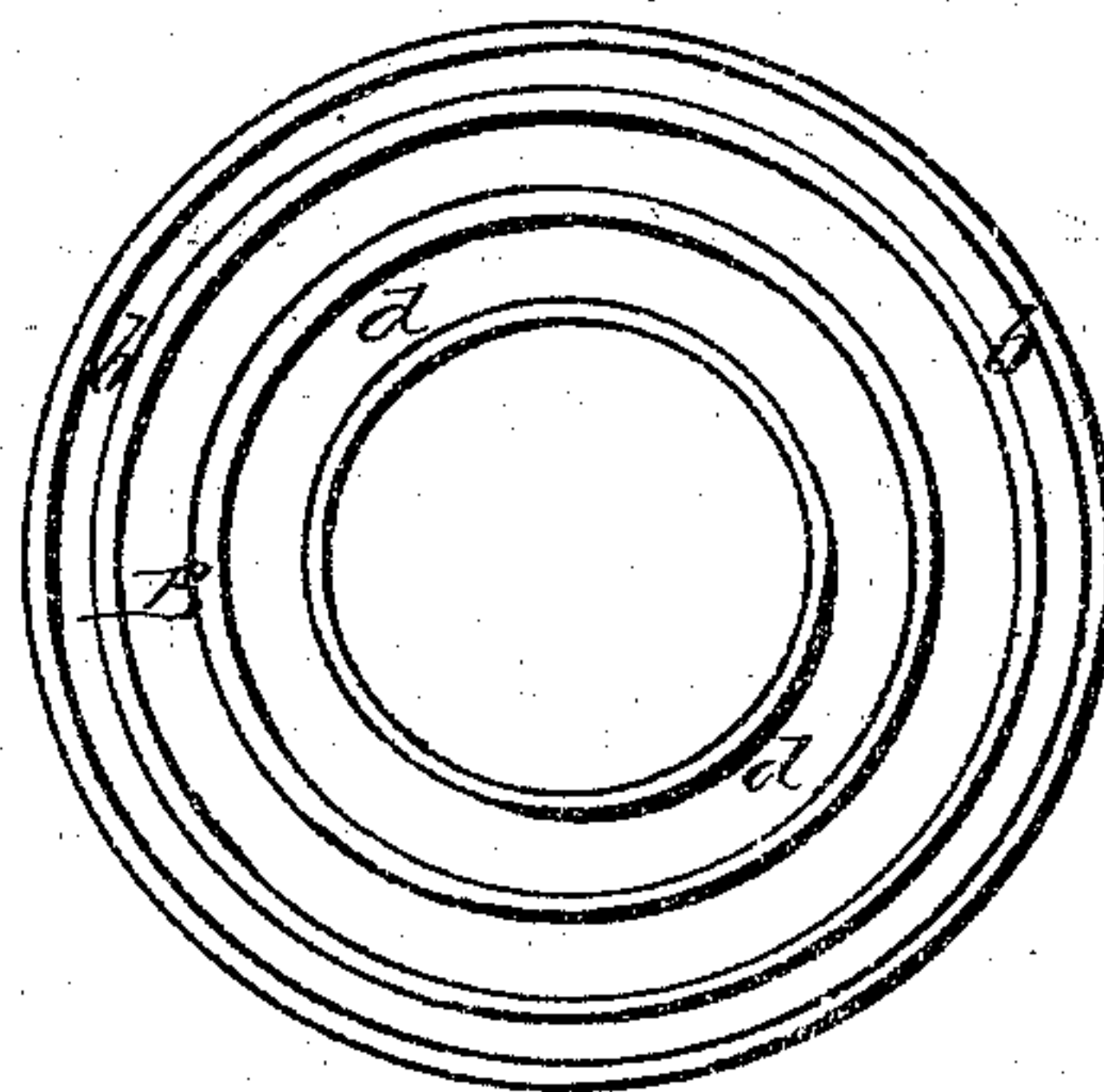


Fig. 3.



WITNESSES.

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JOSHUA GOLDTHORP, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO R. H. SMITH, OF SAME PLACE.

IMPROVEMENT IN STOVE-RETORTS FOR THE MANUFACTURE OF HYDROCARBON GAS.

Specification forming part of Letters Patent No. **152,626**, dated June 30, 1874; application filed May 16, 1874.

To all whom it may concern:

Be it known that I, JOSHUA GOLDTHORP, of Pittsburg, in the county of Allegheny and in the State of Pennsylvania, have invented certain new and useful Improvements in Retorts for the Manufacture of Gas in Stoves; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a retort for manufacturing gas in stoves, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation of a stove, partly in section, showing a longitudinal vertical section of the retort. Fig. 2 is an inverted view of the top of the retort, and Fig. 3 is a plan view of the lower part of the retort.

A represents a stove of any suitable construction. On the inside of the bottom part of this stove, and near the base, are formed projecting lugs or brackets *a a*, which serve as a resting-place for the retort. The retort is composed of two pieces, B and C, the bottom part, B, having the grooves of two seals, *b* and *d*, upon its ends. The projecting edge of the seal *b* rests upon the lugs *a* when in position. The upper part, C, of the retort has sharp ends, which fit respectively into the seals *b d*, and from the center of its curved top is a circular flange or ring, *h*, projecting downward, and forming a dividing-wall, making the retort into two compartments, D and D'. The fire for heating is placed in the stove at G, below the retort, the fire, heat, and smoke passing up through the center of the retort. When the retort and stove are red hot the material from which the gas is made is fed through the inlet-pipe *m* into the inside chamber D of the retort, where it is exposed to the greatest heat, and the gas generated has to remain in this inner chamber until it

attains a sufficient pressure to force it under the lower edge of the flange or ring *h* into the outer compartment D', from whence it passes by the outlet *n*.

The advantages of this retort are, that its form allows of its being made of any material suitable for the purpose, and that the gas is compelled by the ring *h* to remain for a longer time in contact with the red-hot surface of the retort nearest the fire, thus making a better quality of gas. It is also much easier to take out and clean or repair, and the stove to contain it may be made less costly.

A very important advantage is, that in the event of any leakage of gas forcing its way through the seals the same will pass on up the flues, as the seals are all covered inside the stove, and it is thus impossible for any gas to escape outside, and thus avoiding all effluvia or bad smell.

The seals *b d* of the retort are to be filled, as is usual, with lead or any other suitable metal or compound.

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

1. The lugs or brackets *a a*, cast or otherwise formed on the inside of the bottom part of the stove, for the purposes herein set forth.

2. The within-described retort, formed in two parts, B and C, with seals *b d*, as shown and described, and for the purposes herein set forth.

3. The dividing flange or ring *h*, formed in the retort, and dividing the same into two compartments, D D', for the purposes herein set forth.

4. The combination of the retort B C with seals *b d*, and interior dividing-flange *h*, the inlet *m*, outlet *n*, and the stove A with lugs or brackets *a a*, all constructed substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 24th day of April, 1874.

JOSHUA GOLDTHORP. [L. S.]

Witnesses:

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