

J. GREEN.

Improvement in Gas-Retorts.

No. 129,276.

Patented July 16, 1872.

Fig. 1.

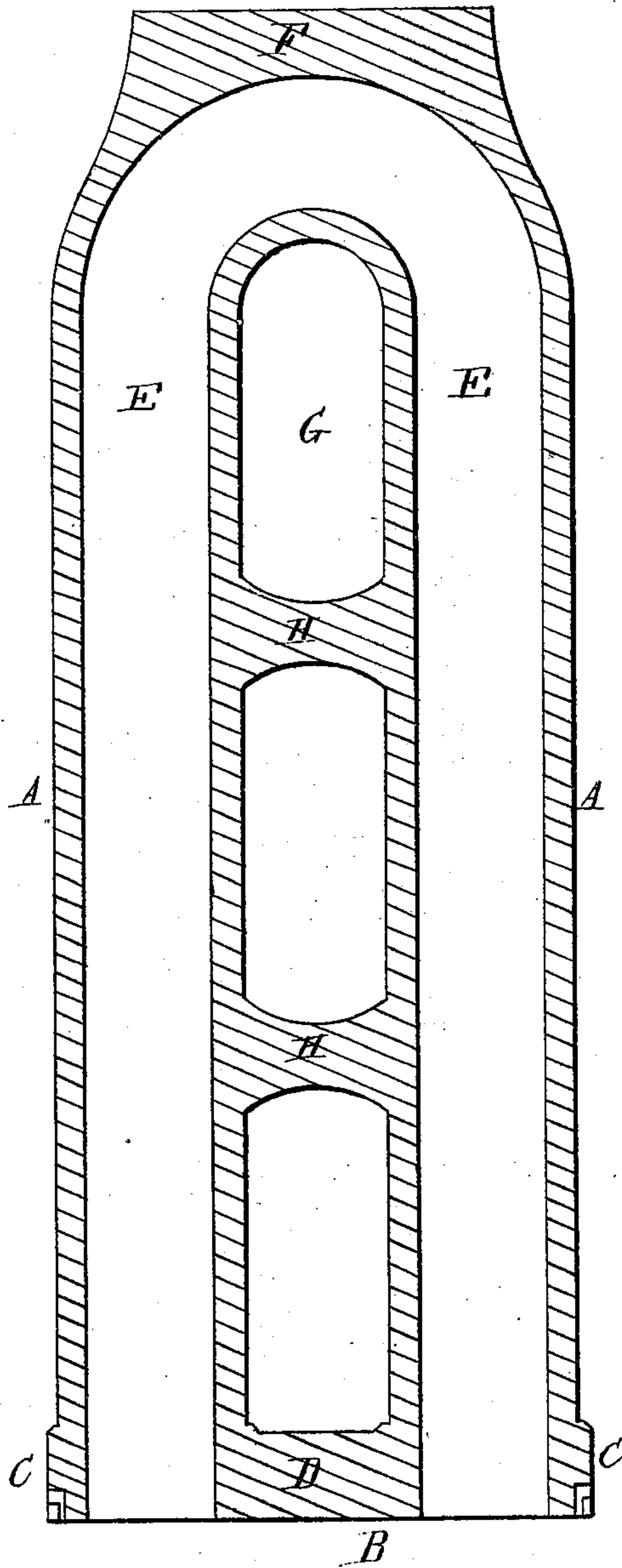
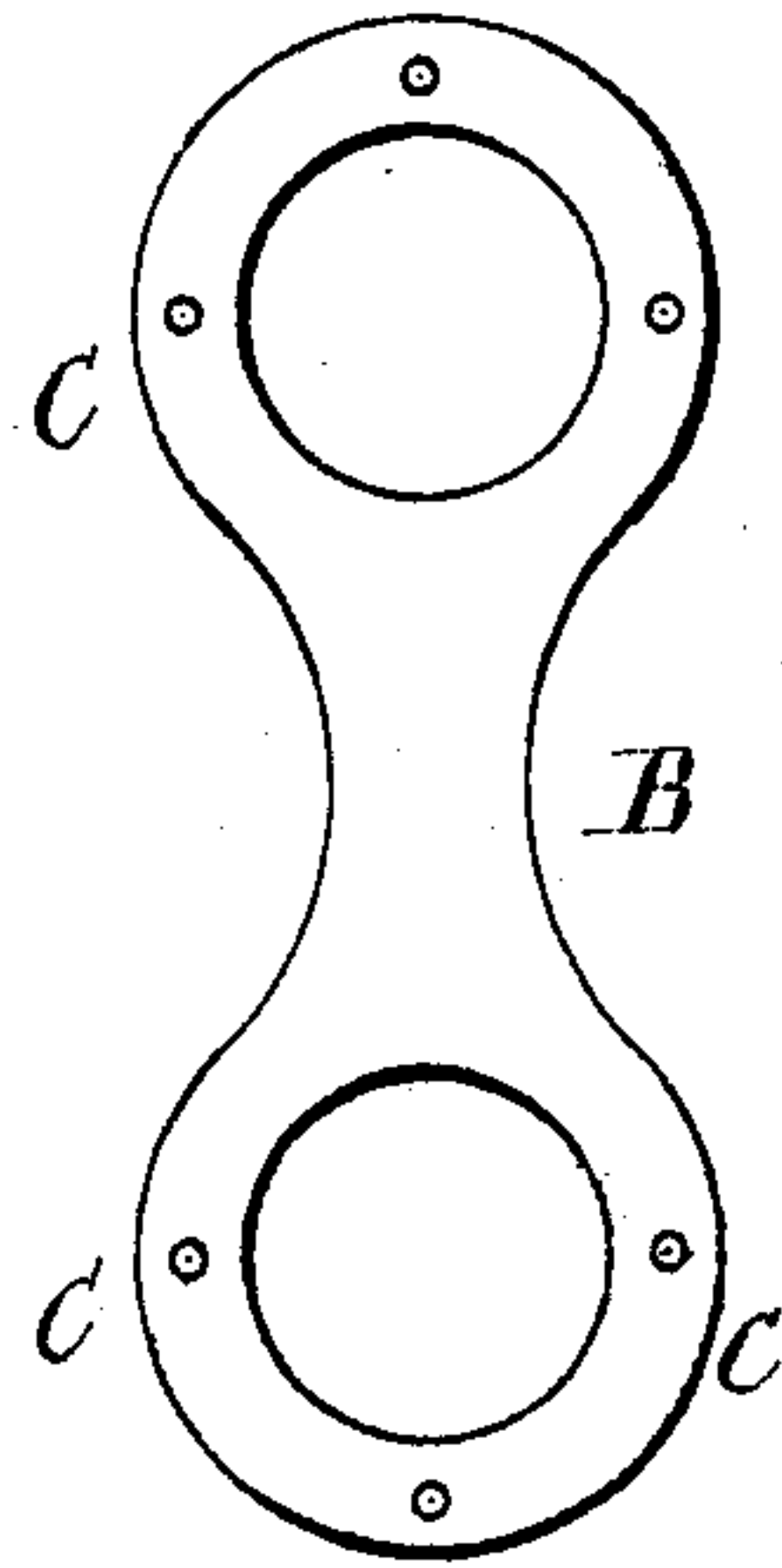


Fig. 2.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN GAS-RETORTS.

Specification forming part of Letters Patent No. 129,276, dated July 16, 1872.

To all whom it may concern:

Be it known that I, JAMES GREEN, of St. Louis, in the county of St. Louis and State of Missouri, have invented a new and valuable Improvement in Gas-Retorts; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a vertical central section of my invention. Fig. 2 is a front end view of the same.

This invention has relation to a double-chambered gas-retort, in which the process of gas generating is carried on by first charging one of the chambers, and then, after said charge is partially spent, supplying the other, in order that the first products of distillation of the second chamber may be conducted through the first chamber containing incandescent material for the purpose of causing a decomposition of impurities and converting the condensable substances into a permanent and elastic gas. The novelty of this invention consists in the improved method of construction, whereby the contents of the chambers of the retort are enabled to receive the greatest possible benefit from the surrounding heat, and whereby the retort is rendered strong and durable, besides being otherwise increased in efficiency and value.

The accompanying drawing is a full illustration of my invention.

The improved retort is designed to be made either of clay or metal, and in the form of the letter U, or what may be termed a siphon-shape. The end of each arm, A, is open to receive its charge. B represents the head which is cast with the retort, and consists of the two wings, C, connected by a brace, D. When the retort is in use each of these wings is provided with a separate mouth-piece to close it. At the bend of the siphon retort, where the two chambers E E communicate,

the material is re-enforced by means of the enlargement or protuberance F, which strengthens that part of the retort, and provides a means whereby the same may be properly supported on the walls of the furnace without the necessity of placing beyond the action of the heat the charged portions of the retort. The sections A of the retort being separated by a space, G, the heat is allowed to entirely surround them, and thus bring their contents to the desired condition as speedily as possible and with a saving of fuel. H represents ties spanning the space between the two sections, and cast or molded as parts of the retort. These ties are intended to brace and strengthen the retort, and to thereby render it more secure for shipment and use.

The carbonization is thought to be reduced by the use of this form of retort.

The retort may be made of metal or fire-clay, and while retaining its siphon character or form may have its sections constructed either cylindrical, elliptical, hexagonal, or otherwise. When made of fire-clay the transverse pieces H D, and re-enforcement F, are indispensable for the purposes of strength and security.

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

1. The improved U-shaped or siphon gas-retort, having the two sections A A inclosing the communicating chambers E E, and having between them the space or spaces G traversed by the braces D H H, substantially as specified.

2. The improved U-shaped gas-retort having the re-enforcement or protuberance F, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JAMES GREEN.

Witnesses:

JOHN K. TIFFANY,
SAMUEL KNOX, Jr.