

J. GREEN.
Fastening for Gas-Retort Lids.

No. 218,672.

Patented Aug. 19, 1879.

Fig. 1.

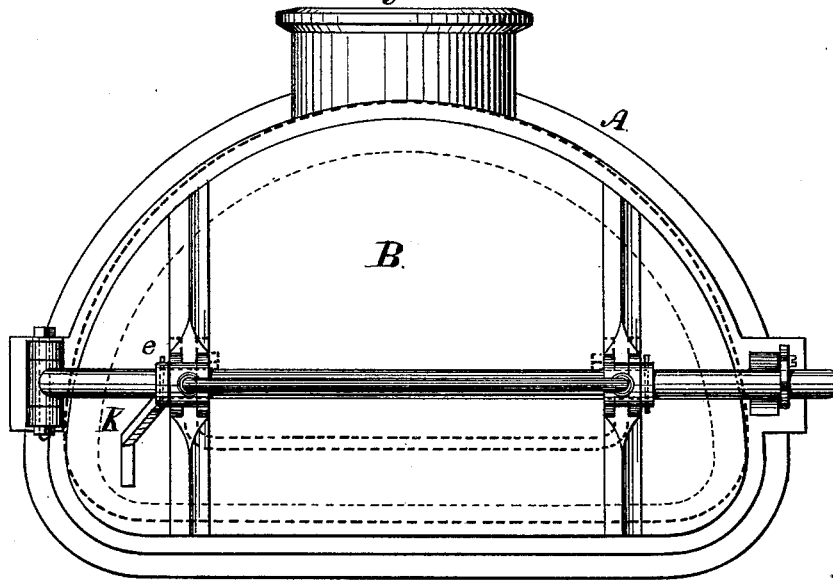


Fig. 2.

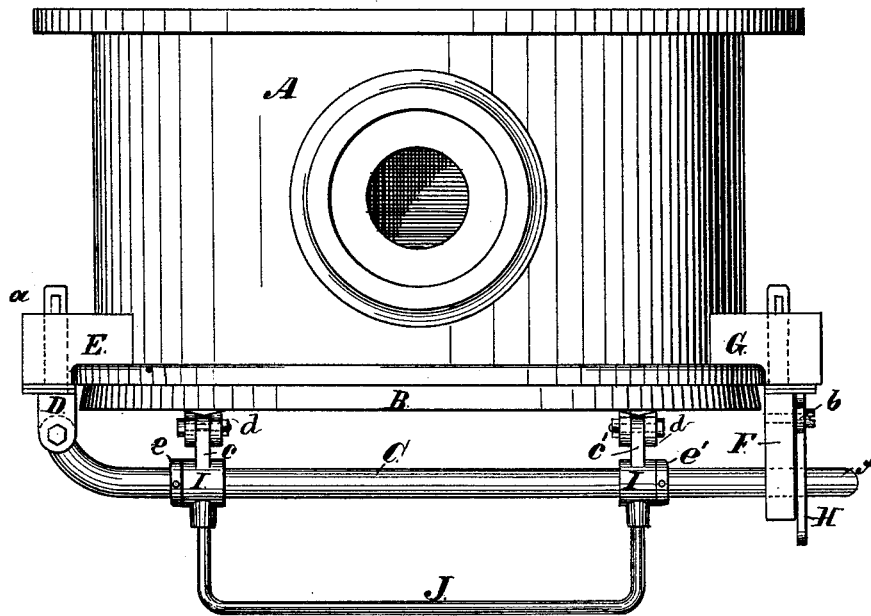
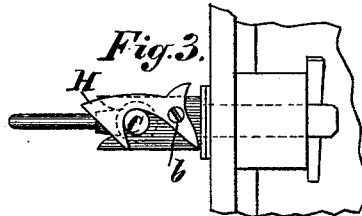


Fig. 3.



Witnesses:

*Henry Eichling,
M. F. Clifton*

Inventor

*Joseph Green
By H. L. Smith*

UNITED STATES PATENT OFFICE.

JOSEPH GREEN, OF NEW YORK, N. Y., ASSIGNOR TO JAMES R. FLOYD, OF
SAME PLACE.

IMPROVEMENT IN FASTENINGS FOR GAS-RETORT LIDS.

Specification forming part of Letters Patent No. **218,672**, dated August 19, 1879; application filed
June 19, 1879.

To all whom it may concern:

Be it known that I, JOSEPH GREEN, of the city, county, and State of New York, have invented a new and useful Improvement in Lids for Gas-Retorts, of which the following is a specification, reference being had to the accompanying drawings, forming part of the same, in which—

Figure 1 is a front elevation of a gas-retort, with its lid, containing my invention. Fig. 2 is a view looking directly down upon the same; and Fig. 3 is a side view of a detached part, particularly described hereinafter.

My invention relates to that class of retort-lids between which and the end of the retort a tight joint is formed by merely pressing the two together, without luting or cement, the metal surfaces of the two parts being planed and finished so as to form a gas-tight joint when pressed together; and consists in the devices and combination of devices herein-after described and claimed, whereby a gas-retort lid may be conveniently forced into contact with the mouth of the retort with a sliding movement, so as to insure therewith a gas-tight joint, and may at pleasure be readily and conveniently loosened and removed therefrom.

A is the neck of a gas-retort, and B the lid by which its mouth is closed. They are of the usual form and construction, the surface of the front end of the said neck being planed and finished with a plain, polished surface, and the lid being preferably provided with a rib projecting inward from its inner face around its perimeter and similarly planed and furnished, whereby a perfect gas-tight joint may be conveniently formed.

C is a round supporting-bar hinged at one end to the arm D, that passes through and is held in a lug, E, formed on the neck A. D may be secured in E, preferably by a key, *a*, for convenience of detachment and removal.

F is an arm held in a similar manner in a lug, G, formed on the said neck on the side opposite to E. This arm is forked at its outer end to receive the end of the bar C. H is a strong hook-latch pivoted at *b* to the arm F, and adapted to drop down over the bar C and

hold it in the fork of the arm F, as seen in Fig. 3. I and I are sleeves fitted loosely on the bar C, and held in position by collars *e e'*. From these sleeves extend the arms *c c'*, that are hinged or pivoted to lugs *d* on the lid. J is a handle or lever connected with the said sleeves, whereby the sleeves may be rotated on the bar C.

It is evident that the sleeves I I and arms *c c'* will act as levers to press the lid into contact with the mouth of the retort when the parts are in the position shown in Fig. 2, and that by throwing up the handle J the lid will be carried downward and away from the mouth of the retort. The hook H may then be thrown up, releasing the end *f* of the bar C, when the said bar, carrying with it the lid, may be swung outward on its hinges, thus opening the mouth of the retort. To again close it, the bar C is swung back into the fork of the arm F, the hook H is dropped down upon it, and the handle J is depressed, whereby the lid is raised and at the same time pressed into contact with the mouth of the retort. By this movement of the lid it is made to slide over the surface of the retort's mouth on its way to its seat thereon, whereby any dust or dirt that may be adhering to such surface, and which might interfere with the forming of a tight joint, are removed.

K is an arm or brace which may be connected to and extend inward toward the lid from the collar *e*. It serves to retain the lid in a vertical position when removed from the retort.

I do not intend to limit myself to the hook H as a means of holding the supporting-bar C in position for closing the retort-mouth. If preferred, a screw or any equivalent device may be employed. I regard, however, the said latch-hook as the preferable form.

I am aware that retort-lids have been supported on hinged bars, so as to be forced against their seat on the neck of the retort with a sliding motion by jointed levers. I do not therefore claim, broadly, a combination of devices whereby a sliding motion is given to the lid as it is forced into contact with the neck of the retort, but limit my claim to the com-

bination of the lid with the mouth of the retort by means of a hinged bar supporting the lid and the eccentric levers described, whereby the lid is forced against the said mouth with a lateral sliding motion.

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

1. The combination, with the mouth of a gas-retort, A, of the lid B, connected with the hinged supporting-bar C by means of a lever or levers hinged to said lid and pivoted on said

bar, all constructed and operating as and for the purpose described.

2. The combination of the retort-neck A, lid B, hinged bar C, the swinging levers described that connect said lid to said bar, the arm F, and hook-latch H, all constructed and operating as and for the purpose specified.

JOSEPH GREEN.

Witnesses:

M. F. CLIFTON,

B. S. CLARK.