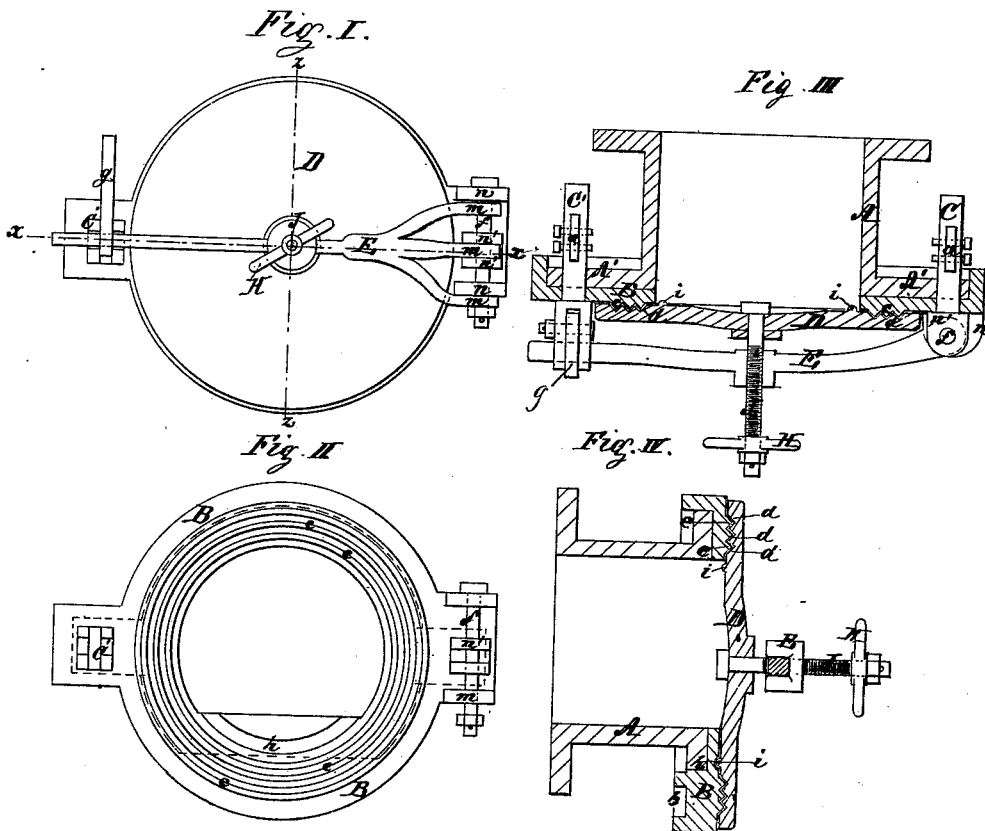


N. JAMIN.
Lid for Gas-Retort.

No. 204,576.

Patented June 4, 1878.



Witnesses.
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IMPROVEMENT IN LIDS FOR GAS-RETORTS.

Specification forming part of Letters Patent No. 204,576, dated June 4, 1878; application filed August 24, 1877.

To all whom it may concern:

Be it known that I, NICOLAÛS JAMIN, of New York, in the State of New York, have made certain Improvements in Lids for Gas-Retorts, of which the following is a specification:

My invention consists of certain improvements of my Patents No. 169,001, No. 173,959, and No. 190,867, and relates to the manner of applying my invention to old retorts or to the old mouth-pieces of retorts.

In my said Patent No. 173,959 I formed alternate recesses and projections, arranged upon the face of the retort-mouth, to fit corresponding projections and recesses on the inner face of the lid; but the said lid and face were not circular, so that no circular or turning movement could be given to the lid to assist in fitting the lid and face more closely and perfectly. Circular lids have before been used; but such lids have had no concentric recesses and projections to accomplish the effect which my present invention secures.

The nature of my invention consists in providing a freely-pivoted circular lid with concentric recesses and projections, in combination with a circular face-plate on the retort-mouth, having corresponding projections and recesses to fit the said recesses and projections of the lid, by which combination and construction, by turning the lid as it is brought close to the retort, the recesses and projections are ground together, thereby securing a perfectly gas-tight fit, which my former construction did not accomplish.

In the accompanying drawings, Figure I represents an outside front view of a gas-retort lid fitted on the end of a gas-retort mouth-piece. Fig. II is the face of the mouth-piece and plate with the lid removed. Fig. III is a horizontal section at line *x* of Fig. I. Fig. IV is a vertical section at line *z* of Fig. I.

Similar letters represent similar parts in all the figures.

A is the gas-retort mouth-piece. B is a plate fitted against the face of this mouth-piece, with suitable provisions to pass around the usual lugs A' A', arranged on the sides of the mouth-piece or retort, and attached to the same by means of suitable bolts, as well as by the keys *a a*, which secure the staple-bolts C C'

to the face-plate B and the lugs A A'. The lower part of this plate B, where the retort or mouth-piece is made straight, is strengthened by suitable ribs *b*.

D is the retort-lid, formed with two or more circular angular recesses, *d d*, in its inner face or surface, corresponding in number, shape, and size and position with the circular angular ribs *e e* made on the face of the face-plate B. On the segmental lower piece of the plate B a circular recess, *h*, is made, into which a circular rib, *i*, arranged on the inner surface of the lid D, fits.

By this arrangement I am able to make a circular lid irrespective of the shape of the retort or mouth-piece, and consequently circular ribs and corresponding recesses, whereby the lids, either during the operation of fastening the same or before, may be turned around, so that the ribs will grind themselves well into their corresponding recesses, and they insure a tight-joint cam without the use of lead or other soft metal between the joints, while the deposit of tar, which always occurs at the mouth of the retort, will then perfectly close this joint between the face-plate B and lid D, sealing the same against any egress of the gas.

Instead of making the ribs on the face-plate and the recesses in the lid, the same may be reversed, if desired.

The lid D is attached to a bar, E, by means of a bolt, J, turning in the lid and screwed into the bar E. This bar E is hinged at one side of the retort by ears *m*, which fit between corresponding ears *n* provided on the plate B and ears *n'* on the end of the staple-bolt C. A vertical pin, *f*, connects the whole, and forms the pivot of the bar E and its attached lid D. The opposite end of this bar E is fitted and arranged to pass into or behind a lug or latch, *g*, pivoted to the staple-bolt C'. The screw or bolt J is provided at its outer extremity with a suitable cross-handle or wheel, H. To force the lid D tight against the face-plate B and firmly retain it there, this screw J is turned in the requisite direction, and the bar E, being held at one end by the latch *g* and at the other end by the pin *f*, gives the desired resistance to the screw J to enable the latter to force the lid D in its place

against the face-plate B with any desired degree of tightness.

I do not claim a circular frame or face-plate attached to the mouth of a retort, broadly; nor do I claim concentric projections and depressions on the face of a retort to fit corresponding recesses and projections on the inner face of the lid; but

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

The combination of a circular face-plate, B, upon the mouth of a retort, having concentric

ribs or projections *e e*, with a circular lid, D, having concentric recesses *d d* to fit the said ribs or projections, and mounted upon a central bolt, J, by which it is borne on the cutter-bar E, and on which it has a free turning movement, substantially as and for the purpose herein specified.

NICOLAÛS JAMIN.

Witnesses:

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