

N. JAMIN.  
CLOSING GAS RETORTS.

No. 173,959.

Patented Feb. 22, 1876.

Fig 2.

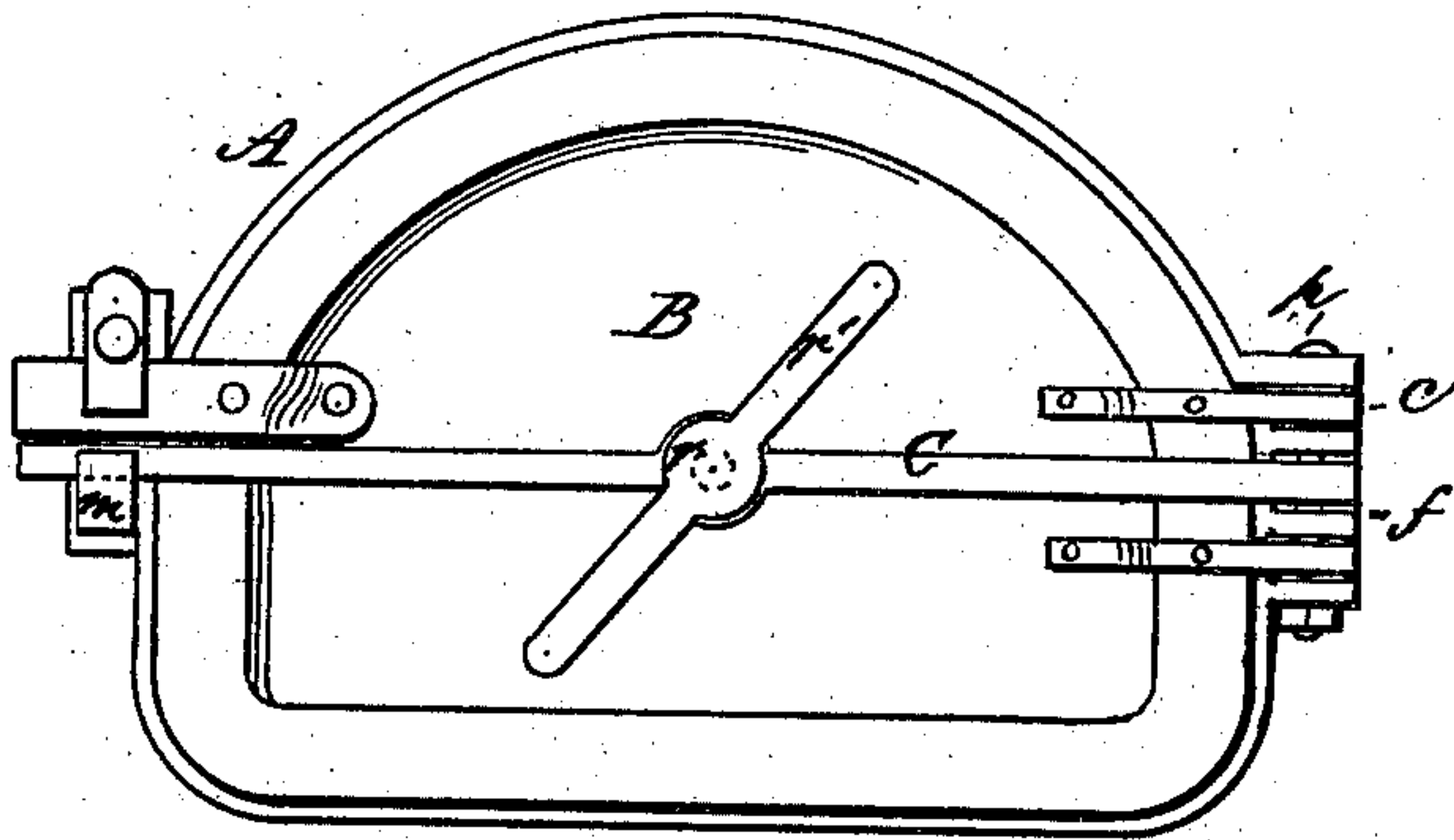


Fig 3.

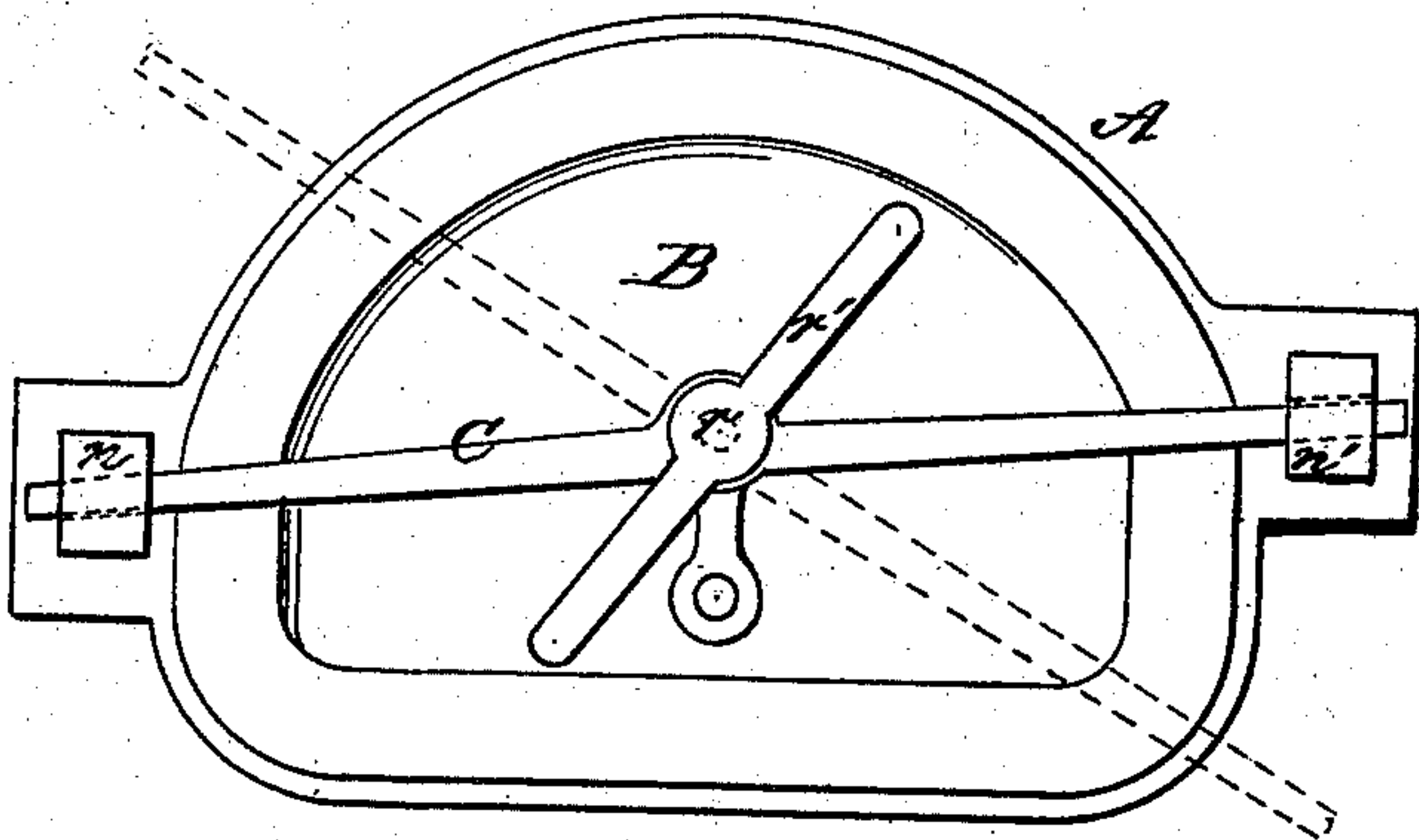
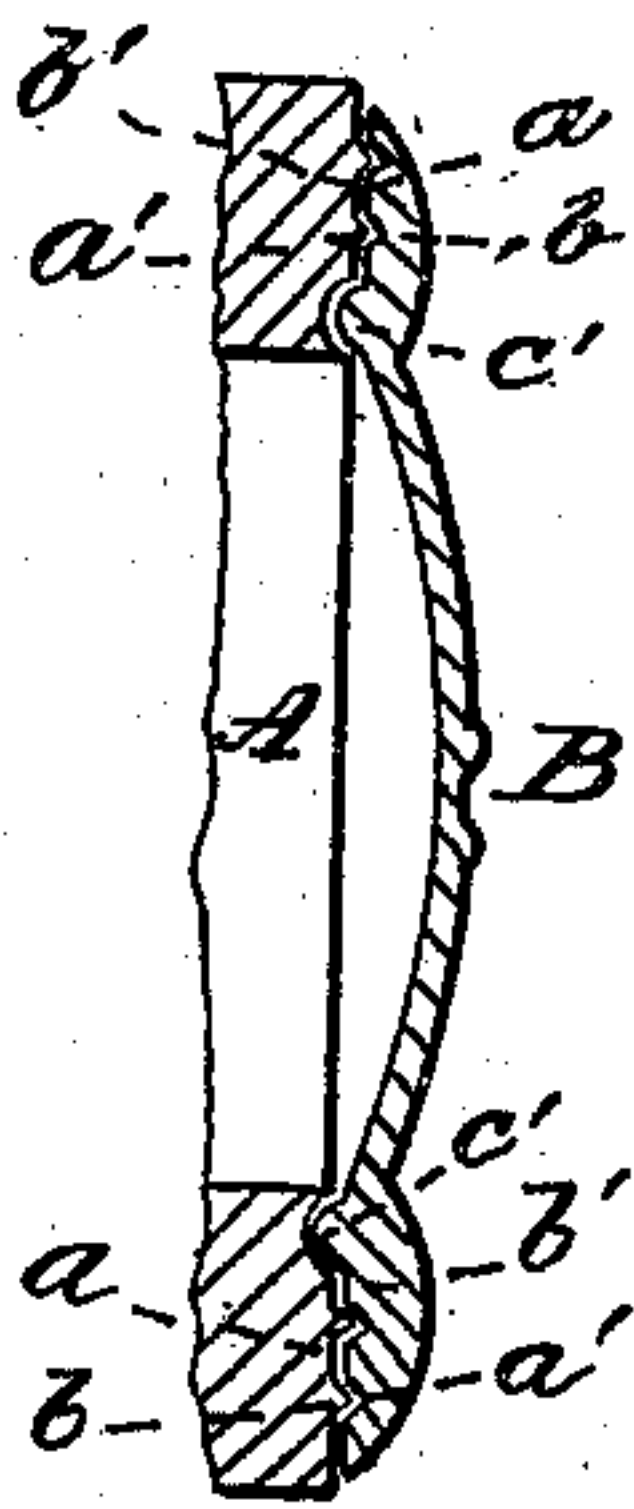


Fig 1



Witnesses.

W. M. Edwards  
James A. Whitney

Inventor.

Nicolas Jamin

# UNITED STATES PATENT OFFICE.

NICOLAUS JAMIN, OF NEW YORK, N. Y.

## IMPROVEMENT IN CLOSING GAS-RETORTS.

Specification forming part of Letters Patent No. **173,959**, dated February 22, 1876; application filed July 16, 1874.

*To all whom it may concern:*

Be it known that I, NICOLAUS JAMIN, of the city, county, and State of New York, have invented certain Improvements in Lids for Gas Retorts, of which the following is a specification:

The object of this invention is to provide for the sure closing of the mouths of coal-gas retorts without the usual luting with loam, and by means capable of easy and convenient manipulation.

The invention consists in the combination of a hinged lid, provided at its circumferential portion with alternate grooves and ribs, with a retort having its mouth provided with coincident grooves and ribs in such manner that when the lid is closed to its place the ribs of the one will fit into the grooves of the other, and when coated with the tar naturally deposited therein during the normal use of the retort will effectually close the same against the escape of gas, provided the lid be properly held home to its place.

Figure 1 is a transverse vertical section of a retort-lid made according to my invention, and applied to the suitable constructed mouth of a retort. Fig. 2 is a front view of the same as made according to one modification of my invention, and Fig. 3 is a like view, showing another modification of the same.

A is the mouth of the retort, made of metal in the usual manner, but cast or formed at its front or face with alternate grooves *a* and ribs *b*, the same extending circumferentially in an endless series having a configuration corresponding to the circumferential form of the mouth of the retort. The lid B is hinged at one side of the mouth A by ears *e*, which fit between similar ears *f* provided on the mouth A aforesaid, a vertical pin, *g*, connecting the whole and forming the pivot of the hinged lid B aforesaid. The circumferential portion of the inner surface of the lid B is formed with a series of alternate grooves and ribs, *a'* *b'*, so arranged that when the lid is shut to its place the grooves and ribs of the one will coincide with the ribs and grooves of the other, so as to form, as it were, an interlocking joint between them, the larger innermost rib *c'* on the lid especially shut-

ting past and within the innermost rib of the mouth A, so that any deposit of tar which may occur at the mouth of the retort in the normal use thereof will be more or less upon this rib *c'* and the immediately adjoining inner rib of the mouth A, and will thereby close the joint between the two, the viscid consistency of the tar sealing the joint against the egress of the gas through the joint, which egress or leakage of gas during the distilling process is ordinarily a source of material loss. To secure this result from the lid and mouth, constructed and combined as described, the lid must be forced snugly home to its place and firmly retained there. To provide for this the cotter-bar C is loosely pivoted at one end to the pin *p*, and its opposite end is fitted and arranged to pass into or behind a stationary lug or latch, *m*, provided at the outer lateral edge of the mouth A. At its center this hinged cotter-bar carries the screw *r*, provided at its outer extremity with a suitable cross-handle, *r'*, the nut of the screw *r* being provided in the center of the cotter-bar aforesaid. When the cotter-bar is fitted behind or into the fixed latch *m* it simply holds the lid snugly to its place, as is desirable preliminary to the final tightening to a gas-tight closeness, as hereinbefore set forth. To secure this tightness the screw *r* is turned in the requisite direction, and the cotter-bar being held at one end by the latch *m*, and at the other by the pin *p*, affords hold or resistance to the screw *r*, to enable the latter to bring the lid to its place upon the mouth with any degree of force or resultant tightness.

As a modification of the devices just hereinbefore particularly described, arrangement shown in Fig. 2 may be used. In this the cotter-bar C is pivoted at its center to the lid B by the screw *r* in such wise that when the lid is swung inward to its place and the cotter-bar is turned to a horizontal position one end thereof will swing downward into or behind a fixed latch, *n*, on one side of the mouth A, and the other upward under a similar but inverted latch, *n'*, at the opposite side, whereupon the screw, being turned in the requisite direction, tightens the lid to its place in substantially the same manner as hereinbefore previously set forth.



When desired, the fixed latch and the hinge *p* may be interchanged to reverse the direction in which the lid may be swung, and to meet any particular emergency.

What I claim as my invention is—

The method herein described for closing gas-retorts, consisting in forming in the mouth-piece a series of concentric grooves and ridges, and a corresponding series in the

face of the lid, so as to condense and collect the tar, thereby sealing the joint without the necessity of using luting or packing, substantially as set forth.

NICOLAUS JAMIN.

Witnesses:

JAMES A. WHITNEY,  
WM. B. PHAIR.