

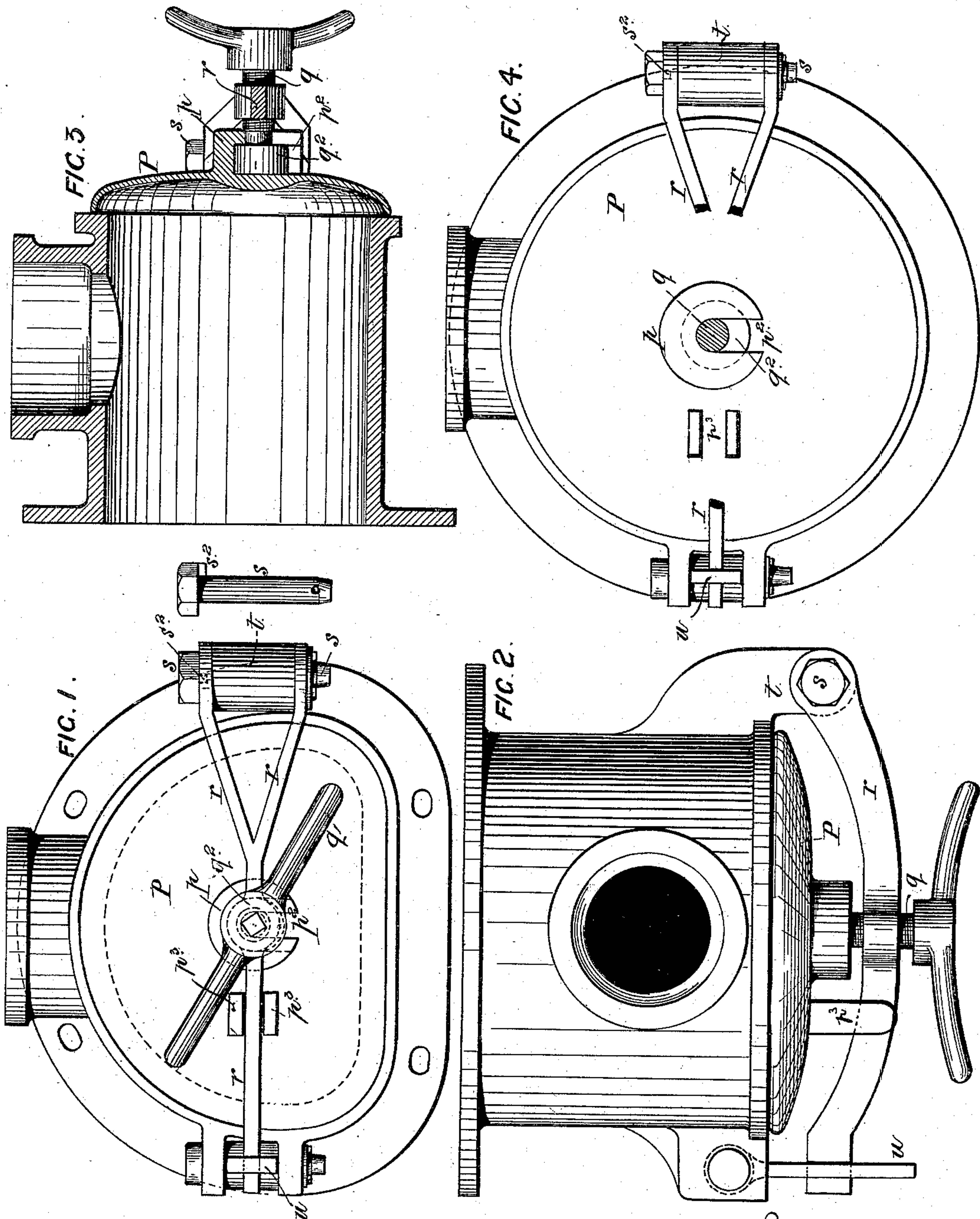
(No Model.)

W. T. WALKER.

GAS RETORT LID.

No. 331,102.

Patented Nov. 24, 1885.



Witnesses:
Wm F Davis
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Inventor:
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UNITED STATES PATENT OFFICE.

WILLIAM THOMAS WALKER, OF BISHOPSWOOD ROAD, HIGHGATE, COUNTY
OF MIDDLESEX, ENGLAND.

GAS-RETORT LID.

SPECIFICATION forming part of Letters Patent No. 331,102, dated November 24, 1885.

Application filed April 22, 1885. Serial No. 163,038. (No model.) Patented in England April 10, 1884, No. 6,229; in France June 12, 1884, No. 162,696; in Belgium June 14, 1884, No. 65,474; in Germany June 17, 1884, No. 3,558, and in Austria-Hungary January 29, 1885, No. 37,431 and No. 3,675.

To all whom it may concern:

Be it known that I, WILLIAM THOMAS WALKER, engineer, a subject of the Queen of Great Britain and Ireland, and residing at
5 Bishopswood Road, Highgate, in the county of Middlesex, England, have invented certain new and useful Improvements in Gas-Retort Lids, (for which I have obtained patents in
10 Great Britain, No. 6,229, dated April 10, 1884; France, No. 162,696, dated June 12, 1884; Belgium, No. 65,474, dated June 14, 1884, and Austria-Hungary, No. 37,431 and No. 3,675, dated January 29, 1885, and have made appli-
15 cation in Germany, dated June 17, 1884,) of which the following is a specification.

The object of this invention is to improve and cheapen the cost of surfaced gas-retort mouth-pieces and their lids and the appli-
20 ances for opening and closing, making their working more perfect and their gas-tightness more reliable than heretofore.

In the accompanying drawings, Figure 1 is a front elevation, Fig. 2 a plan, and Fig. 3 a longitudinal section, of a D-shaped retort
25 mouth-piece and lid constructed according to my invention, and Fig. 4 is a front view of a circular retort and lid embodying my invention, but with the screw and part of the bar broken away.

30 The lid P of the retort (which is made, by preference, of a parabolic curve in section) has no projecting ribs or brackets, such as are ordinarily used, which ribs or brackets I find, when the lid is exposed to expansion and con-
35 traction by unequal heating and cooling, cause its shape to be distorted and make it leaky. The said lid is formed with a recess, p , in it at or about the central portion of the outer side, and has its facing surfaced, and is pressed
40 home to and released from the facing of the mouth-piece (which is also surfaced) by a screw, q , working through a screw-nut in the cross-bar r . The end of this screw q carries an eccentric, q^2 , which engages with the recess
45 p in the lid P, which recess may be in communication with a slot, p^2 , so that the eccentric q^2 can be passed upward along this slot and into the recess p , forming its seating. By
50 this construction the seating can be bored out

connecting the screw to the lid are dispensed with and their cost saved.

One of the defects of apparatus of this class as heretofore constructed has been the constant tendency of the lid to get out of its hori- 55 zontal position and hang downward, thereby giving a constant strain on the hinge, in consequence of which the action becomes impaired and the apparatus is rendered unserviceable. To obviate this, I make the vertical pin s of 60 the hinge to turn in the eye t on the mouth-piece; but I fix the said pin to the cross-bar r , (by a groove and feather, as at s^2 , or otherwise,) so that instead of the cross-bar r moving loosely, as has hitherto been the case, the pin 65 s , thus firmly fixed to the cross-bar r , moves in the eye t on the mouth-piece, which eye is made deep or long, as shown, and is bored out to receive the pin s , which is also turned to fit it easily. 70

For the purpose of steadying the lid and sustaining it in position, I provide a projec-
tion or projections upon the lid, the said pro-
jection or projections being situated at the
side or sides of the bar r , for example, as shown 75 at p^3 , Fig. 1.

Upon the side of the mouth-piece opposite the hinge I provide a movable hinged support or loop, u . This support or loop moves in
80 and out of action laterally, so as to support, secure, or release the bar r , the said support or loop when closed upon the end of the bar sustaining it in its horizontal position.

I claim as my invention—

1. The combination of a gas retort lid hav- 85 ing a recess, p , slotted at the side, with a cross-bar carrying a screw provided with an eccentric to engage with said slotted recess.

2. The combination of the mouth of the re- 90 tort having a long eye, t , with a cross-bar carrying the securing-screw for the retort-lid, and a hinging-pin, s , secured to the cross-bar to turn in said eye, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two sub- 95 scribing witnesses.

Witnesses: WILLIAM THOMAS WALKER.

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Both of 31 Lombard Street, London.