(No Model.)

J. R. FLOYD.

GAS RETORT LID.

No. 438,881. Patented Oct. 21, 1890.

Fig. 2.

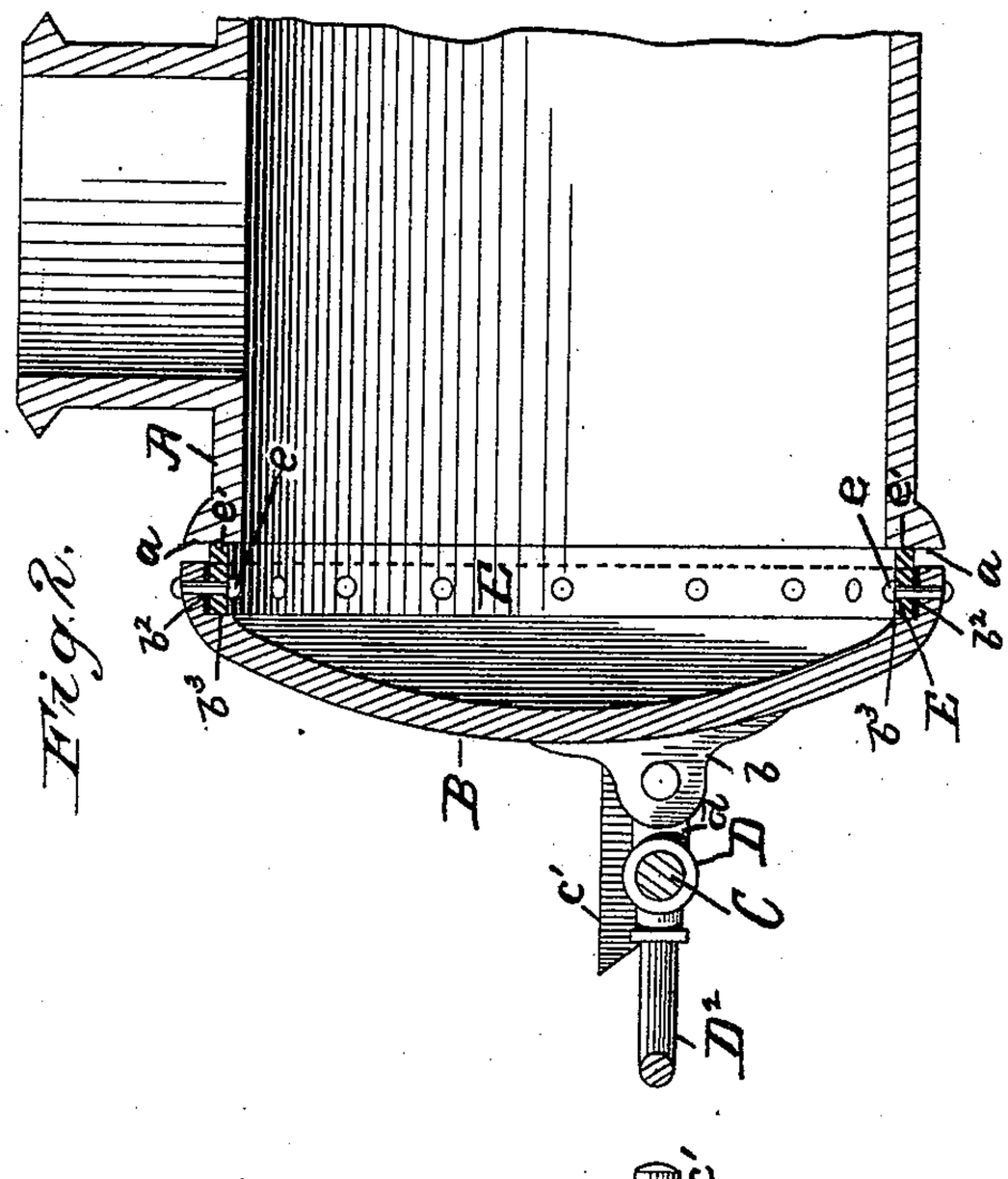
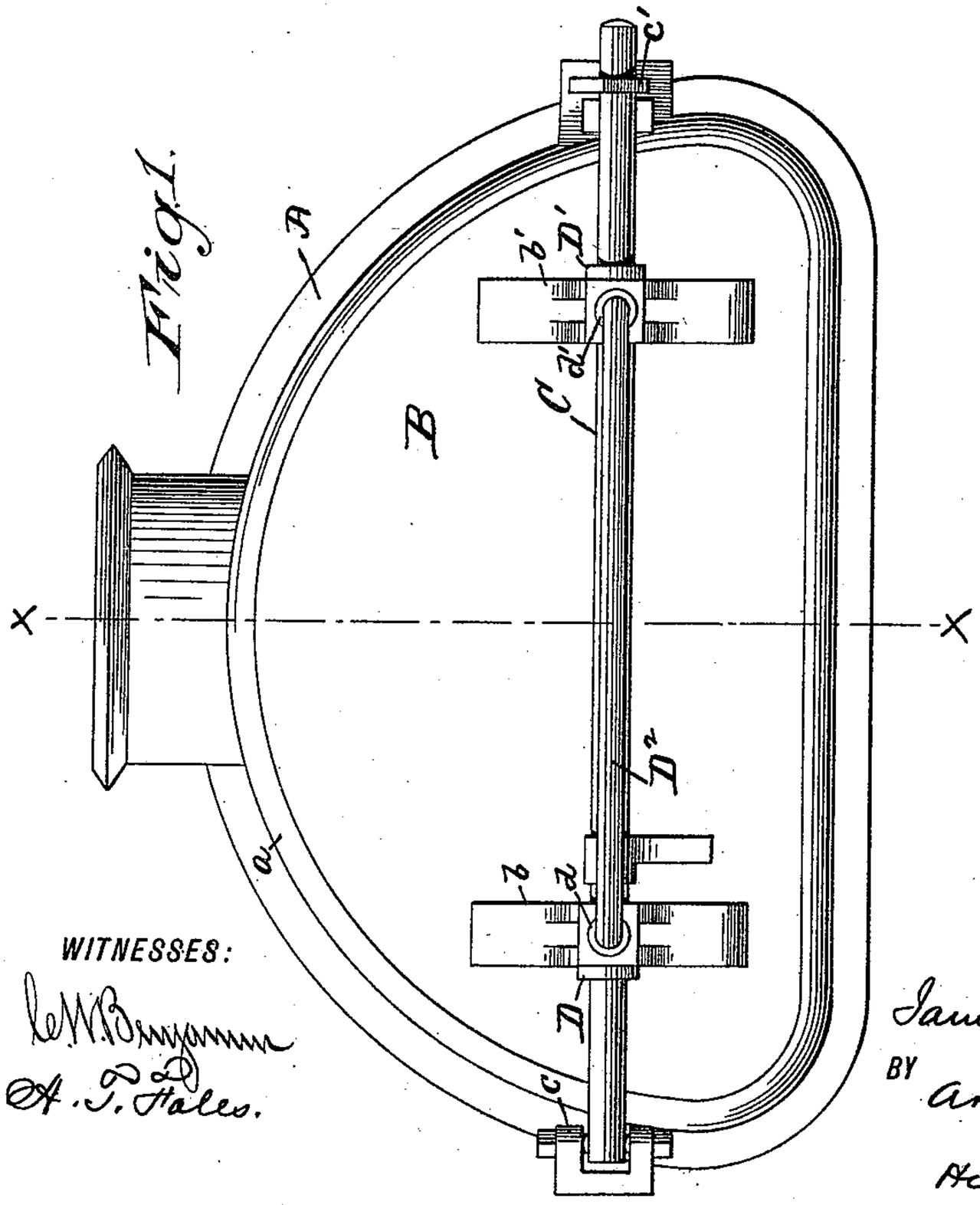


Fig. 1.



WITNESSES:

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GAS-RETORT LID.

SPECIFICATION forming part of Letters Patent No. 438,881, dated October 21, 1890.

Application filed March 26, 1890. Serial No. 345,309. (No model.)

To all whom it may concern:

Be it known that I, JAMES R. FLOYD, of the city, county, and State of New York, a citizen of the United States, have invented certain new and useful Improvements in Gas-Retort Lids, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to that class of gas-retorts in which the lid is supported on a cross-bar hinged to the mouth-piece, and is forced to contact at its rim with a plane bearing-face surrounding the retort-mouth with an edgewise sliding movement, so a gas-tight joint, without the employment of luting or cement, is constituted by the lid-rim on said plane face on the mouth-piece.

My invention consists in the combination, with the mouth-piece, of a retort having a circumferential plane face on its front about the mouth, of a lid hinged to the mouth-piece and adapted to be forced to contact at its rim with said plane face on the mouth-piece with an edgewise sliding movement over and upon the mouth-piece, said lid being provided with a shouldered seat circumferential of its rim, together with a wrought-iron strip seated within said shouldered seat and adapted to project beyond the lid-rim, and rivets or their equivalent passing transversely through the lid and said wrought-iron strip and serving to hold the latter detachably seated upon the shouldered seat in the former, as hereinafter particularly set forth.

Figure 1 is a front elevation of a retort mouth-piece and its lid containing my invention, and Fig. 2 is a vertical central section of the same on line *x x*, Fig. 1.

A is the mouth-piece, which is usually of cast-iron, and has circumferential of the mouth the plane face *a*, which is polished and finished as a smooth surface.

B is the lid, which is hinged to the mouth-piece, and is adapted to be forced to contact at its rim with the face *a* of the mouth-piece with a sliding movement of the lid edgewise over and upon the mouth-piece. The lid may be supported upon a bar C by means of sleeves D D′, fitting loosely on the bar and having fixed to them, respectively, the arms *d d′*, which are hinged to lugs *b b′* on the lid. The bar C is hinged to the mouth-piece at *c* at one side, and its opposite end is adapted to engage a latch or catch *c′* at the opposite side of the mouth-piece.

D^2 is a lever uniting and fixed to the sleeves D D′, and serves to partially rotate the sleeves on the bar C by being raised or depressed.

It is obvious that when the lid is swung to the mouth-piece on the hinged bar C and detained in this position by the engagement of the catch *c′* with the said bar, by depressing the lever D^2 the rotation of the sleeves D D′ on the bar will, through the medium of the arms *d d′*, cause the lid B to be forced to contact with the face *a* on the mouth-piece with a sliding movement of the lid-rim across said face.

I make no claim to novelty herein for the devices shown and described for hinging the lid to the mouth-piece and adapting the lid to be forced to contact therewith with a sliding movement, as these devices have been heretofore patented to Joseph Green in Letters Patent No. 218,672, dated August 19, 1879, and I do not limit myself for the purposes of my present invention to these described devices for hinging the lid to the mouth-piece and adapting it to be forced to contact therewith with a sliding movement, as any known and equivalent devices may be employed for this purpose without variation from the essential feature of my invention.

In carrying out my present invention I form a shouldered seat in the rim of the lid, said seat being composed of the peripheral face b^2 and the shoulder b^3, substantially at a right angle to said face b^2 and extending circumferentially of the lid. This seat is preferably constituted on the inner side of the rim of the lid, as shown.

At E is shown a strip of wrought-iron, which is adapted to be seated against the face b^2 and to rest or bear upon the shoulder b^3, and I provide rivets, bolts, or the equivalent thereof to secure the strip E to its seat in the rim, as shown at *e*. A packing may be advantageously interposed between the seat b^2 and the face of the wrought-iron strip. The strip E projects beyond the rim of the lid toward the face *a* on the rim of the mouth-piece, and the outward face of the strip at *e′* is a plane corresponding to the described face *a*, so that

when the lid is closed the plane face e' of the strip meets and moves over and across the plane face a, thus constituting a joint without luting or cement.

I am aware that metal rings have been heretofore attached to the rims of retort-lids and adapted to impinge upon the rim of the mouth-piece, and hence I make no claim, broadly, to such device; neither do I claim, broadly, herein the combination, with the lid B, of a wrought-iron rib circumferential of the lid-rim and projecting toward and adapted to impinge upon and move over and across the face a of a mouth-piece when the lid is forced to contact with said mouth-piece with a sliding movement; but I limit my claim hereunder to such a rib, in combination with the mouth-piece and a lid having the movement in closing, as set forth, when said lid is provided with the shouldered seat b^2 b^3 and the wrought-iron strip E is seated in said seat and held detachably thereto by rivets or bolts e. This means of detachably uniting the strip E to the lid-rim I find to possess the advantage of being economical in construction of the parts, durable in use, and readily manipulated when it is desired to substitute a new strip for one theretofore in use.

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

In a gas-retort the mouth-piece A of which has the plane cast-iron face a circumferential of the mouth, and a lid B, hinged to said mouth-piece and adapted to be forced to contact at its rim with said plane face on the mouth-piece with a sliding movement across said face, the said lid provided with the peripheral seat-face b^2 and the circumferential shoulder b^3 substantially at right angles to said seating-face at the lid-rim, in combination with a wrought-iron strip E, seated on said peripheral seating-face and bearing against said shoulder b^3 and adapted to project beyond said lid-rim, and having the exposed plane face e' on its outward edge, together with the rivets or bolts e, passed transversely through said lid-rim and said strip, substantially as and for the purpose set forth.

JAMES R. FLOYD.

Witnesses:

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FRED. W. FLOYD.