

J. DUNSEITH.

Lids for Closing Gas Retorts, Sugar Filters, &c.

No. 152,983

Patented July 14, 1874.

Fig. 1

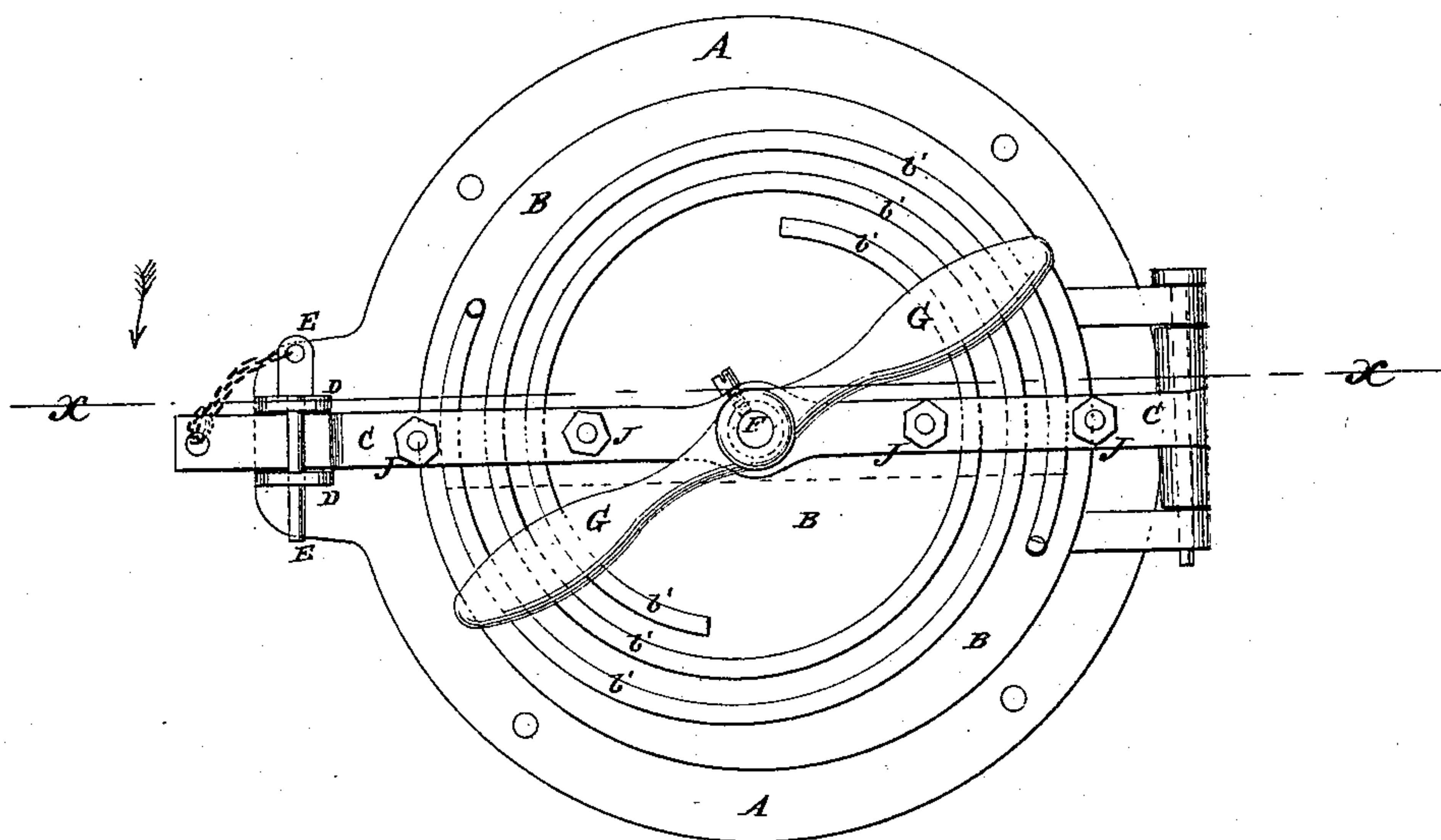
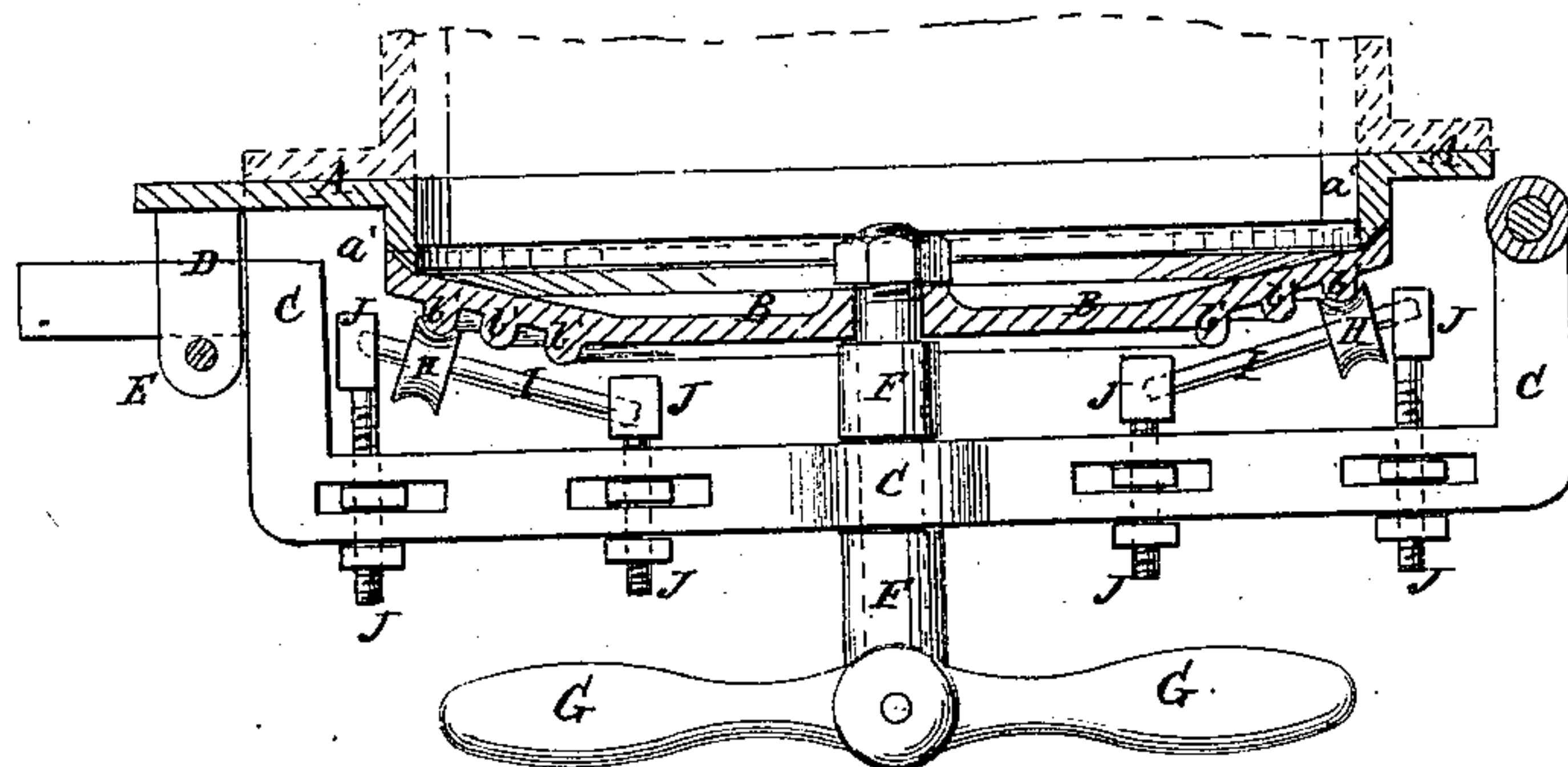


Fig. 2



WITNESSES:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN LIDS FOR CLOSING GAS-RETORTS, SUGAR-FILTERS, &c.

Specification forming part of Letters Patent No. **152,983**, dated July 14, 1874; application filed June 13, 1874.

To all whom it may concern:

Be it known that I, JAMES DUNSEITH, of the city, county, and State of New York, have invented a new and useful Improvement in Lids for Gas-Retorts, Sugar-Filters, &c., of which the following is a specification:

Figure 1 is a front view of my improved lid. Fig. 2 is a horizontal cross-section of the same, taken through the line *x x*, Fig. 1, looking in the direction of the arrow.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved lid for gas-retorts, sugar-filters, and other vessels that require to be closed air-tight, and in such a way that they can be readily opened and closed, as required. The invention consists in a lid rotating upon its seat, to enable it to clear its said seat of obstructions, and in the rotating lid provided with a central shaft, and with inclined spiral flanges, and the rollers, the slide-rods, and the adjustable bolts, in combination with the lock-bar and the mouth of the vessel, as hereinafter fully described.

A represents the mouth of the retort, filter, or other vessel, around which is formed a ring flange or rim, *a'*, the edge of which is beveled off, or has a bead formed upon it. B is the lid, the part of which that fits upon the edge of the flange *a'* may be beveled or flat, as may be desired. The cover B is made slightly convex, or inclining upward toward its center, and upon its outer surface are formed two concentric spiral beads or flanges, *b'*, gradually increasing in height from their inner to their outer ends. C is the lock-bar, which is hinged at one end to the vessel A, and its other end, when closed, shuts down into a slotted lug, D, at the other side of the lid B, where it is secured by a pin, E, or other convenient fastening. In the center of the bar C is formed a hole, in which is swiveled a short shaft, F, the inner end of which is rigidly attached to the center of the lid B, so that the said lid may be swung open and shut by and with the bar C, and so that the said lid B may be rotated by turning the said shaft F. To the outer end of the shaft F is

secured a cross-head, C, for convenience in turning it and the lid, and in opening and closing said lid. H are two small grooved rollers, which rest upon the flanges or beads *b'* of the lid B, and run loosely and slide freely upon short rods I, the ends of which are inserted in holes in the heads of the bolts J, and which are so formed or placed that the rods I may be parallel with the inclined surface of the lid B. The bolts J pass up through the bar C, and are secured in place adjustably by nuts screwed upon their outer ends upon the outer side of the bar C, and by lock-nuts screwed upon them upon the lower side of the bar C, or in slots in the body of the said bar. By this construction, by adjusting the bolts J, the wear may be taken up and the rollers H may be adjusted to bear with any desired force against the lid B.

By this construction, should tar, coke, or other substance get upon and adhere to the mouth of the vessel, a few turns of the lid B back and forth will bring said lid to its seat, and the said substance, instead of doing any harm, will be a positive benefit by serving as a seat to the lid. Afterward, by turning the lid in the direction to cause the rollers H to roll up the inclined beads *b'*, the lid B will be forced firmly into its seat. This construction also enables the lid, should it become worn, to be readily ground to its seat, so as to always shut air-tight.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A lid, B, rotating upon its seat, to enable it to clear its said seat of obstructions, substantially as herein shown and described.

2. The rotating lid B, provided with a central shaft, F, and inclined spiral flanges *b'*, and the rollers H, slide-rods I, and adjusting-bolts J, in combination with the lock-bar C and the mouth A of the vessel, substantially as herein shown and described.

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Witnesses:

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