

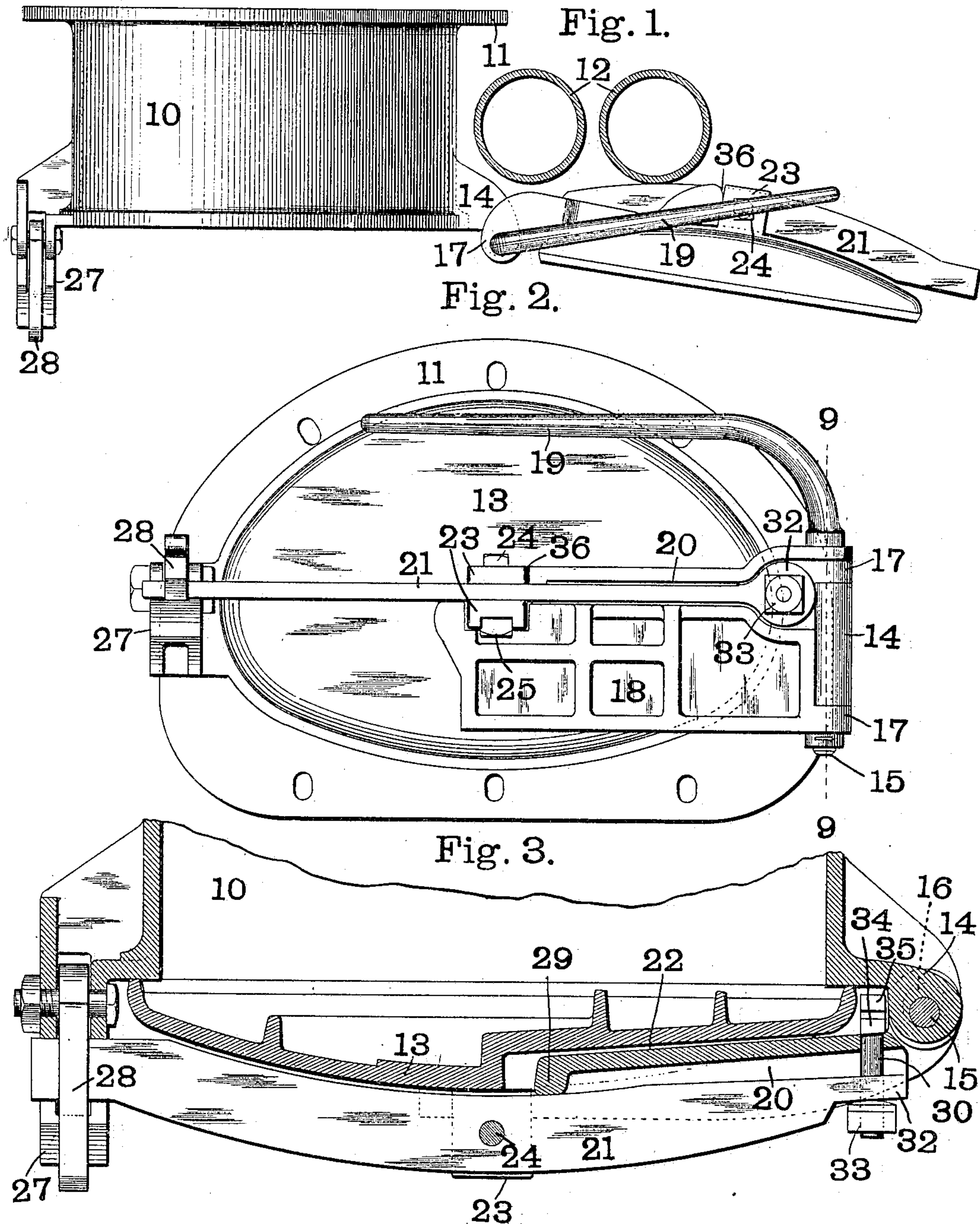
No. 758,935.

PATENTED MAY 3, 1904.

S. B. RUSSELL.
CLOSURE FOR GAS RETORTS.
APPLICATION FILED FEB. 15, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses

Fred Henke.

W. A. Alexander.

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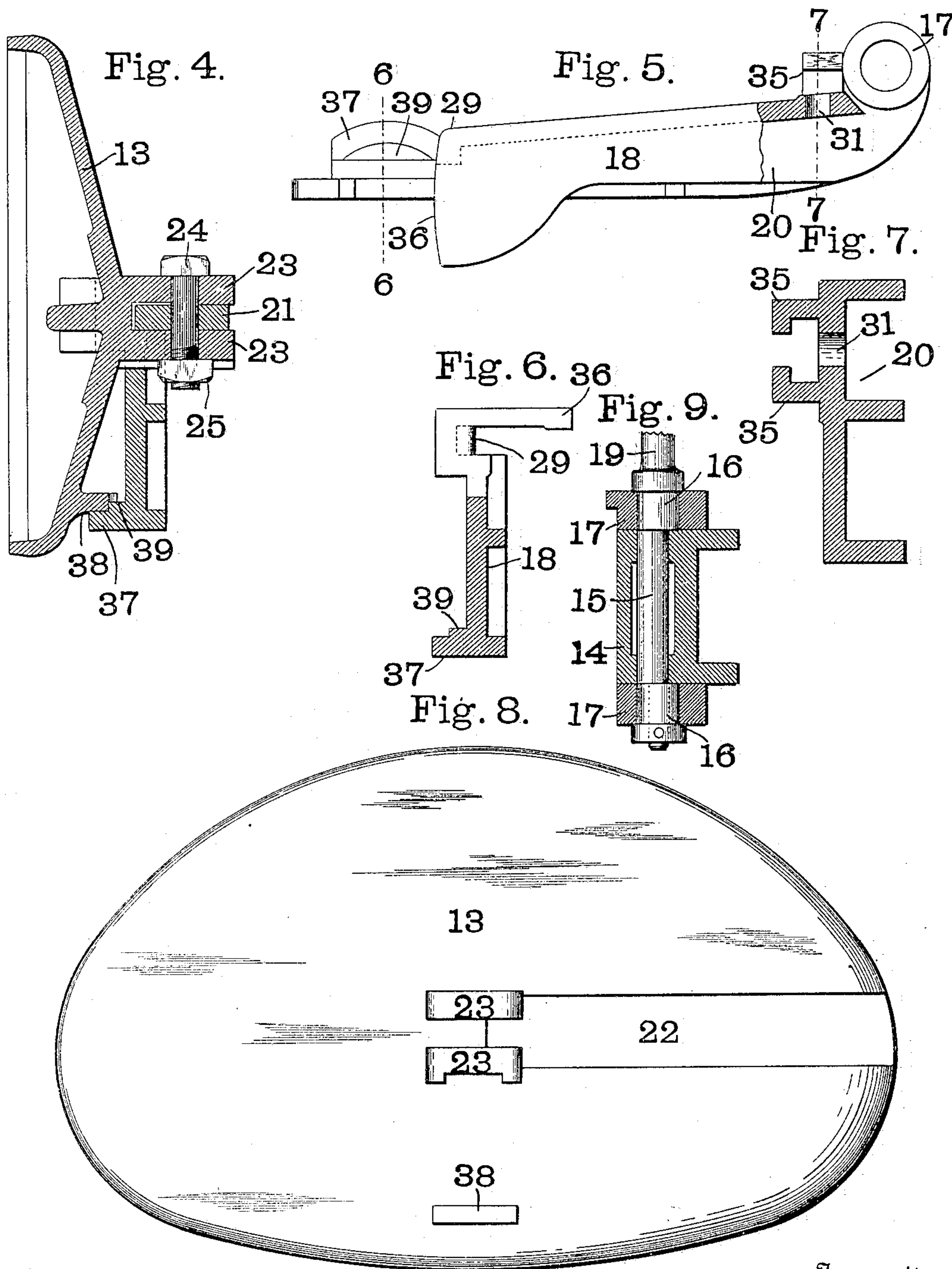
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UNITED STATES PATENT OFFICE.

SILAS BENT RUSSELL, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE PARKER-RUSSELL MINING & MANUFACTURING COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI.

CLOSURE FOR GAS-RETORTS.

SPECIFICATION forming part of Letters Patent No. 758,935, dated May 3, 1904.

Application filed February 15, 1904. Serial No. 193,599. (No model.)

To all whom it may concern:

Be it known that I, SILAS BENT RUSSELL, a citizen of the United States, residing at the city of St. Louis, in the State of Missouri, have
5 invented a certain new and useful Closure for Mouthpieces for Gas-Retorts, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the
10 same, reference being had to the accompanying drawings, forming part of this specification.

My invention consists in part in the combination, with a retort-mouthpiece, of a door
15 therefor, a locking-bar, a latch carried by said mouthpiece and engaging said bar, a supporting-plate engaging said bar and supporting said door, and connections between said supporting-plate and mouthpiece for tightening
20 said door.

My invention also consists in certain other novel features and details of construction, all of which are described in the following specification and pointed out in the claims affixed
25 hereto.

In the accompanying drawings, which illustrate one form of retort-mouthpiece made in accordance with my invention, Figure 1 is a top plan view on a reduced scale, showing
30 the complete mouthpiece with the door or lid in its open position. Fig. 2 is a front elevation also on a slightly-reduced scale, showing the door closed. Fig. 3 is a horizontal central section. Fig. 4 is a vertical central section through the lid or door together with the
35 locking-bar and supporting-plate. Fig. 5 is partly a top plan view and partly a section of the supporting-plate. Fig. 6 is a section on the line 6 6 of Fig. 5. Fig. 7 is a section on the
40 line 7 7 of Fig. 5. Fig. 8 is a front elevation of the door or lid alone, and Fig. 9 is a section on the line 9 9 of Fig. 2.

Like marks of reference refer to similar parts in the several views of the drawings.

45 10 is the mouthpiece, which may be of any usual form and is preferably provided with a

flange 11, by means of which it is secured in position against the retort.

12, Fig. 1, illustrates a pair of stand-pipes arranged adjacent to the mouthpiece. 50

13 is the door or lid, which is adapted to fit against the front face of the mouthpiece 10 so as to make a gas-tight joint therewith.

14 is a lug carried by the mouthpiece 10. Passing through the lug 14 is a rod or shaft 55 15. At the upper and lower ends of the rod or shaft 15 are eccentrics 16, Figs. 3 and 9, which engage with bearings 17 on the supporting-plate 18. The rod or shaft 15 is provided with an L-shaped handle 19, by means of
60 which it, together with the eccentrics 16, is operated to move the supporting-plate 18 toward or from the mouthpiece 10. The supporting-plate 18 is provided with a grooved portion 20, adapted to receive one end of a locking-
65 bar 21, and the lid or door 13 is provided with a groove 22 for receiving the grooved portion 20 of the supporting-plate. The locking-bar 21 is pivoted between a pair of lugs 23, formed on the lid or door 13, by means of a bolt 24
70 passing through said lugs. The bolt 24 is provided with a nut 25, which is engaged by a groove or slot in the under face of the lower lug 23.

The mouthpiece 10 is provided at the opposite side from the lug 14 with a projection 27, which coöperates with a latch 28 to retain the end of the locking-bar 21. This projection 27 and latch 28 are of the usual form and will not be particularly described. The support-
80 ing-plate 18 is provided with a bearing 29, which forms a fulcrum for the locking-bar 21. The locking-bar 21 is secured to the supporting-plate 18 by means of a bolt 30, passing through an opening 31 in the said supporting-
85 plate and through an eye 32 on the end of the locking-bar 21. The locking-bar 21 may be adjusted with relation to the supporting-plate by means of a nut 33 on the end of the bolt
90 30. The bolt 30 is provided with a T-shaped head 34, which is adapted to pass between the intumed ends of a pair of lugs 35, formed on

the back of the supporting-plate. This bolt 30 is placed in position before the door is secured to the mouthpiece, and after the said door has been secured in position the lug 14 will prevent the rotation of the bolt, so that the bolt will be firmly held in position by means of the inturned ends of the lugs 35. The supporting-plate 18 is also provided with a bearing 36, (best shown in Fig. 5,) which bearing is adapted to rest against the edge of the upper lug 23 on the door, so as to prevent lateral movement between the supporting-plate and door. On the rear of the supporting-plate 18 is a supporting-lug 37, upon which rests a lug 38, formed on the door or lid 13. This lug 38 has a concave face, which is adapted to rest against a convex bearing 39 on the upper face of the lug 37.

In the operation of my device when the door is closed the end of the locking-bar 21 is engaged by the latch 28, thus securing it in position. The handle 19 is then turned to cause the eccentrics 16 to draw the rear end of the supporting-plate toward the retort-mouthpiece. This movement is communicated through the bolt 30 to the rear end of the locking-bar. This locking-bar through this action on the bolt 24 and on the fulcrum 29 of the supporting-plate draws the door or lid 13 firmly against the end of the mouthpiece 10, and at the same time a slight lateral movement between the door and mouthpiece is caused by the action of the eccentrics 16, so that the door is caused to make a gas-tight joint with the mouthpiece. In case the door or mouthpiece becomes worn the wear can readily be taken up by turning the nut 33, thus drawing the rear end of the locking-bar 21 closer to the supporting-plate 18.

While my mouthpiece is simple of construction, it is very reliable in action and is not liable to get out of order. At the same time all the parts are easily manufactured, and if one part becomes worn out or broken it can easily be replaced by another part.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination with a retort-mouthpiece, of a door therefor, a locking-bar, a latch carried by said mouthpiece and engaging said bar, a supporting-plate engaging said bar and supporting said door, and means for forcing said door into contact with said mouthpiece.

2. The combination with a retort-mouthpiece, of a door therefor, a locking-bar, a latch carried by said mouthpiece and engaging said bar, a supporting-plate engaging said bar and supporting said door, and connections between said supporting-plate and mouthpiece for tightening said door.

3. The combination with a retort-mouthpiece, of a door therefor, a locking-bar, a latch carried by said mouthpiece and engaging said

bar, a supporting-plate engaging said bar and supporting said door, and a cam connecting said supporting-plate and mouthpiece for tightening said door.

4. The combination with a retort-mouthpiece, of a door therefor, a locking-bar, a latch carried by said mouthpiece and engaging said bar, a supporting-plate supporting said door, adjustable connections between said locking-bar and supporting-plate, and connections between said supporting-plate and mouthpiece for tightening said door.

5. The combination with a retort-mouthpiece, of a door therefor, a locking-bar pivoted to said door, a latch carried by said mouthpiece and engaging said bar, a supporting-plate engaging said bar and supporting said door, and means for forcing said door into contact with said mouthpiece.

6. The combination with a retort-mouthpiece, of a door therefor, a locking-bar pivoted to said door, a latch carried by said mouthpiece and engaging said bar, a supporting-plate engaging said bar and supporting said door, and connections between said supporting-plate and mouthpiece for tightening said door.

7. The combination with a retort-mouthpiece, of a door therefor, a locking-bar pivoted to said door, a latch carried by said mouthpiece and engaging said door, a supporting-plate supporting said door, adjustable connections between said supporting-plate and locking-bar, and connections between said supporting-plate and mouthpiece for tightening said door.

8. The combination with a retort-mouthpiece, of a door therefor, a locking-bar, a latch carried by said mouthpiece and engaging said bar, a supporting-plate supporting said door, a bearing on said supporting-plate forming a fulcrum for said bar, and means for forcing said door into contact with said mouthpiece.

9. The combination with a retort-mouthpiece, of a door therefor, a locking-bar, a latch carried by said mouthpiece and engaging said bar, a supporting-plate supporting said door, a bearing on said supporting-plate forming a fulcrum for said bar, and connections between said supporting-plate and mouthpiece for tightening said door.

10. The combination with a retort-mouthpiece, of a door therefor, a locking-bar pivotally connected to said door, a latch carried by said mouthpiece and engaging said bar, a supporting-plate supporting said door and bearing against said locking-bar, adjustable connections between said locking-bar and supporting-plate, and a cam connecting said supporting-plate and mouthpiece for tightening said door.

11. The combination with a retort-mouthpiece, of a door therefor, a locking-bar, a latch carried by said mouthpiece and engaging said

bar, a supporting-plate for said door, a hinge
connecting said supporting - plate and said
mouthpiece, a retaining-lug on said support-
ing-plate adjacent to said hinge, and a bolt
5 connecting said locking-bar and supporting-
plate, said bolt being retained by said lug and
hinge.

In testimony whereof I have hereunto set
my hand and affixed my seal in the presence of
the two subscribing witnesses.

SILAS BENT RUSSELL. [L. s.]

Witnesses:

FRED HENKE,
D. C. BETJEMAN.