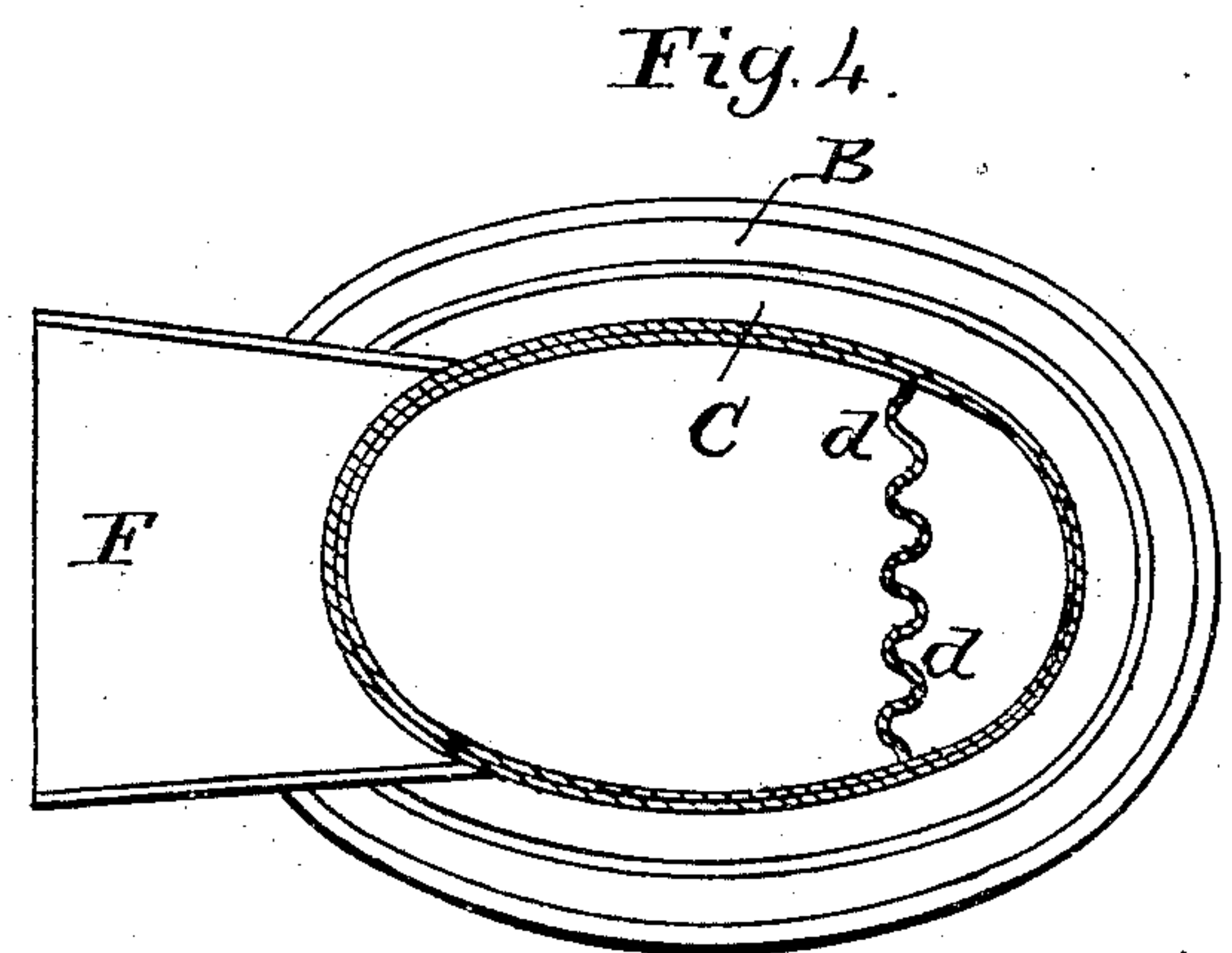
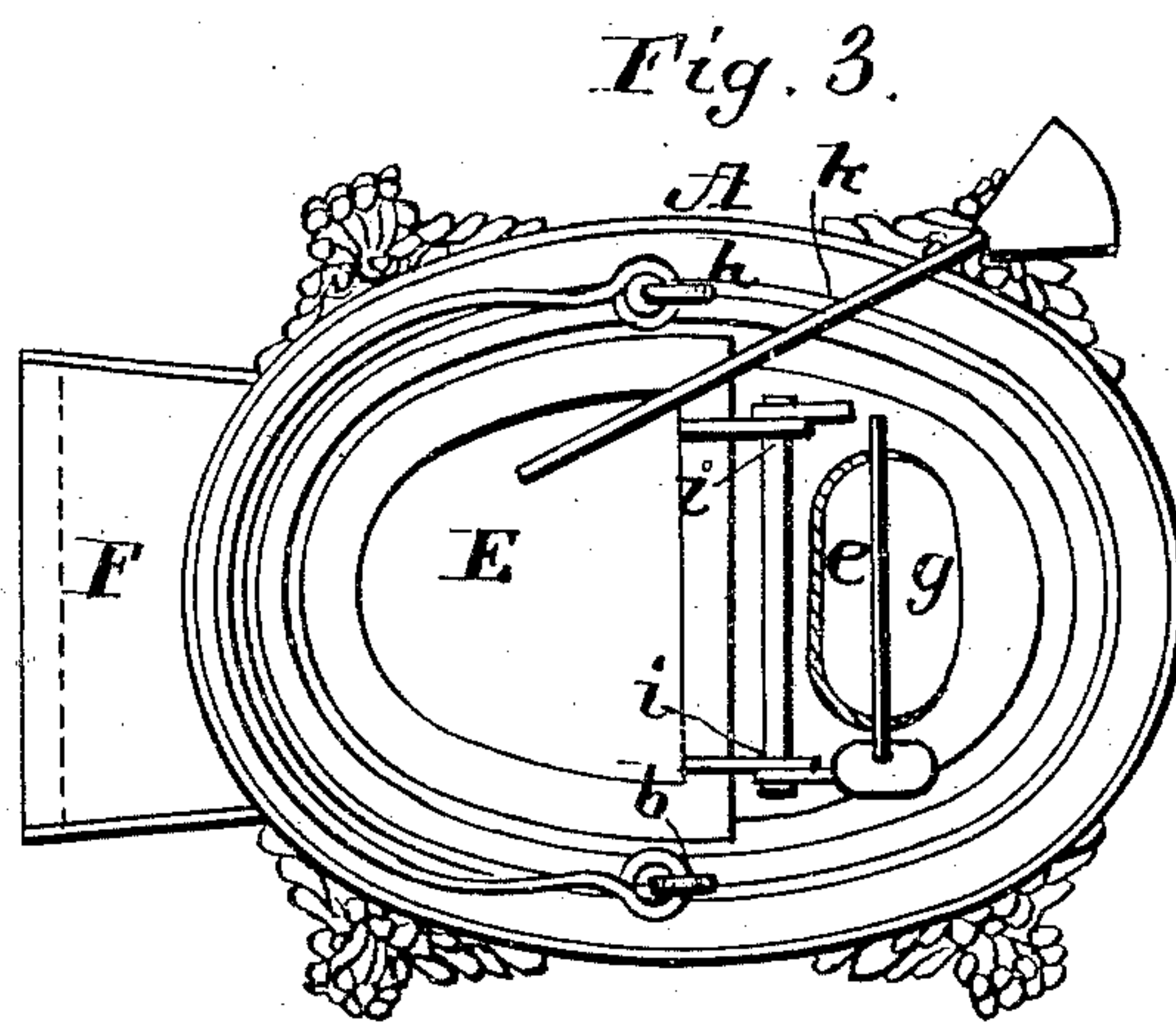
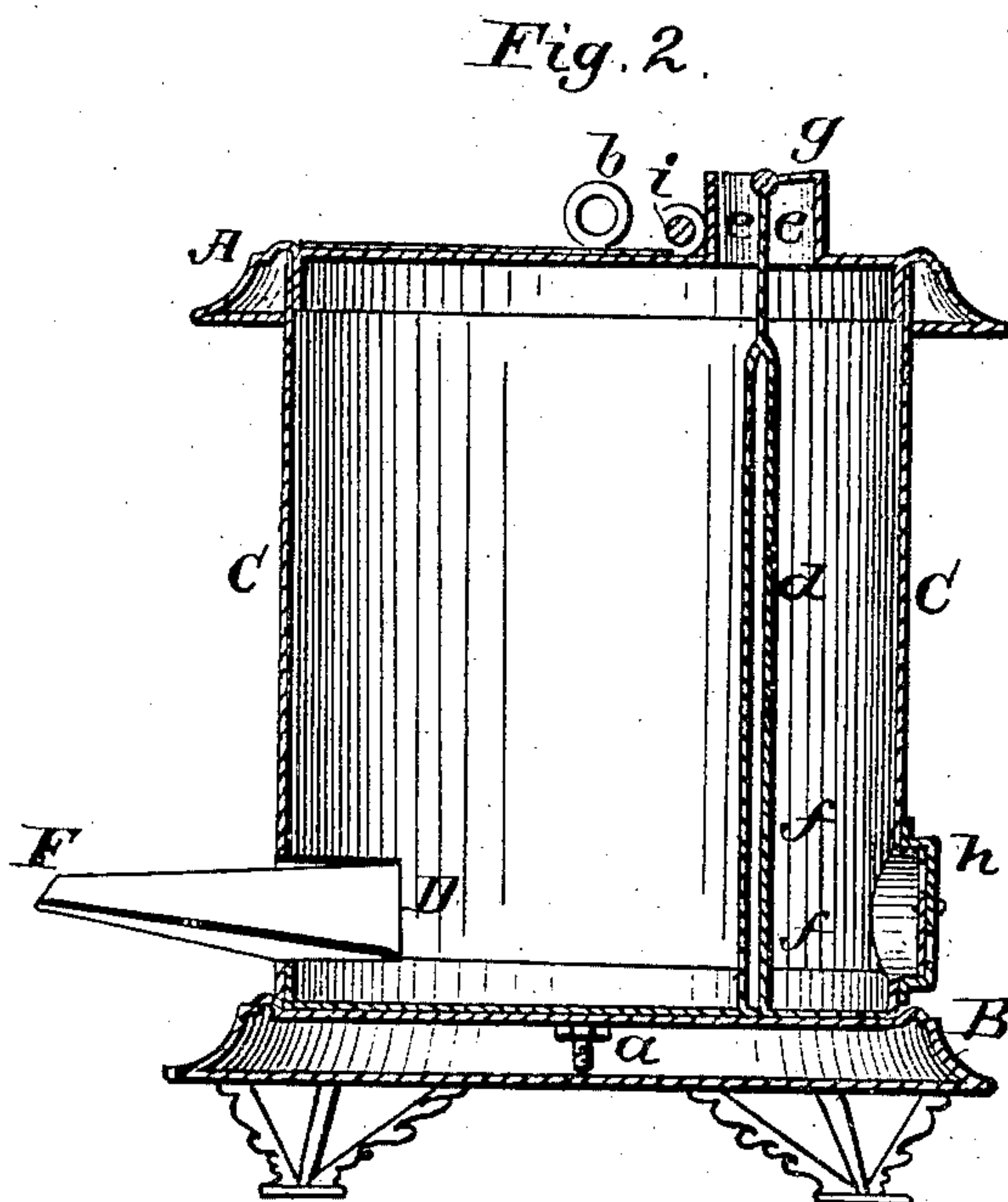
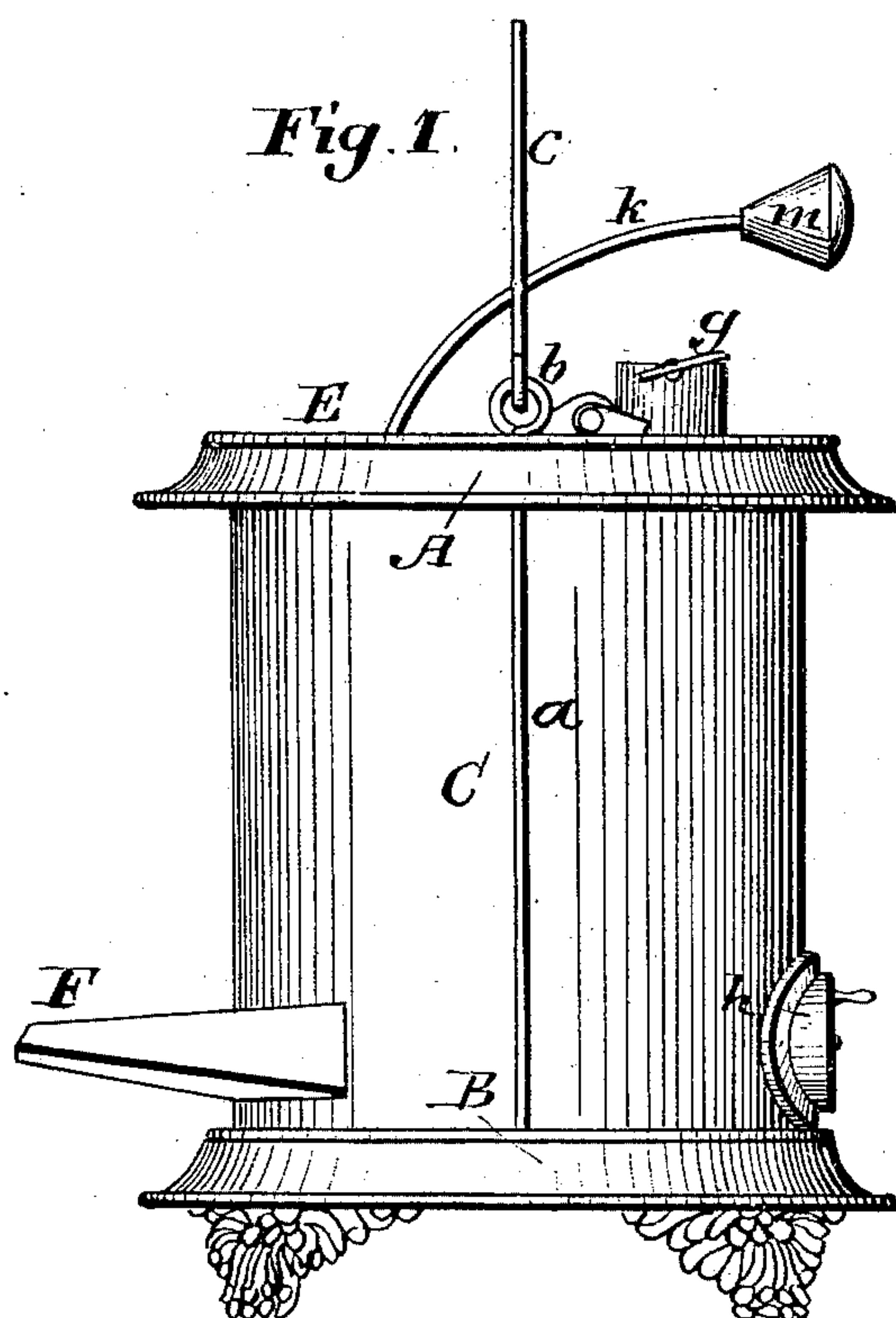


# BUTTLES & COWLES.

Tinner's Stove.

No. 65,341.

Patented June 4, 1867.



Witnesses:

*J. D. Butler*  
*T. J. Chamberlain*

Inventor:

*C. A. Buttles & J. A. Cowles*  
*By atty. A. B. Houghton.*



# United States Patent Office.

C. A. BUTTLES AND JAMES COWLES, OF MILWAUKEE, WISCONSIN.

Letters Patent No. 65,341, dated June 4, 1867.

## IMPROVEMENT IN TINNER'S STOVE FOR HEATING SOLDERING-IRONS.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that we, C. A. BUTTLES and JAMES COWLES, of Milwaukee, in the county of Milwaukee, and State of Wisconsin, have invented certain new and useful Improvements in Stoves or Fire-Pots for Tinning or Heating Soldering-Irons; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 represents an elevation of the stove or fire-pot.

Figure 2 represents a vertical section through the same.

Figure 3 represents a top plan, and

Figure 4 represents a horizontal section through the stove or fire-pot.

Similar letters of reference, where they occur in the separate figures, denote like parts in all the drawings.

Our invention consists in certain arrangements by which we can readily increase, diminish, or shut off the draught, and cause the fire to burn downward or upward, and as a consequence greatly economize the consumption of charcoal, as well as to regulate the heat upon the soldering-irons.

To enable others skilled in the art to make and use our invention, we will proceed to describe the same with reference to the drawings.

The top and bottom plates A B of the stove or fire-pot may be of cast iron, and the body or jacket C of sheet iron, and it may be of an oval form, and the whole held firmly together by screw-rods, *a*, the tops of which may form the dead-eyes *b* into which the bail *c* is hooked for carrying the stove or fire-pot from place to place. The mouth or opening D into which the soldering-irons are thrust to be heated is slightly elevated above the bottom plate B, and the hearth F is long enough to support the "iron" whilst it is being heated. In the interior of the stove or fire-pot, and towards the rear of the enclosed space, there is a vertical division or partition, plate *d*, extending from the bottom to the top of the stove, and dividing the pipe collar or exit opening *e* into two equal parts, or nearly so. This plate *d* we propose to corrugate, so that it may be light and stiff, but more particularly so that it may expand and contract more readily without cracking, as it is subject to varied degrees of heat and coolness. The bottom portion of the plate *d* is furnished with a series of holes, *f*, for a purpose to be hereafter mentioned, and a damper, *g*, is so arranged in the exit flue or pipe collar *e* as that it may close either half of said flue space so as to turn the draught to either side of the division-plate *d*, as circumstances may require. There is also a register, *h*, in the rear of the stove, which communicates with the space or passage in rear of the division plate *d*, for allowing a draught from the external air to pass, without coming through or in contact with the fire in the other division of the interior of the stove or fire-pot. There is a lid, E, on the top plate, and hinged thereto as at *i*, this lid covering an opening through which the charcoal or other fuel is fed into the stove or fire-pot. To the lid E is united an arm, *k*, that is bent upward and rearward, and has at its extreme end a weight, *m*, which is an overpoise to the lid when it is thrown back, and thus tends to hold it back, but which is an underpoise to the lid when the lid is down, allowing it to remain down. The arm *k*, moreover, serves as a handle for raising or lowering the lid at any time to check draught or feed in fuel.

When a fire is to be made in this stove or fire-pot, the damper *g* is turned back over the rear half of the exit, as seen in fig. 2, and then, the draught being direct from the mouth D to the exit, the fire will burn freely. The fire having been regularly and freely started the damper may be turned forward to close the direct draught, and then the air to supply combustion and promote draught must pass down through the coal, thence through the openings *f*, and up behind the partition plate *d*, and out through the exit flue. This downward draught causes the fire to burn downward through the charcoal, and thus create the densest heat where it is most required, viz, where the soldering-irons lie or are placed. When it is necessary to check the fire, but still keep it ignited, the register *h* is opened, and this supplies a current of air through the space in the rear of the partition *d*, without its coming through the fire-chamber, and of course checks all draught through the fire-chamber, and so long as the register *h* remains open the fire will smoulder away, but still keep ignited, and the moment the register is closed it will immediately brighten up again. And in such a stove or fire-pot very fine charcoal can be burned advantageously, even to the coal-dust, which cannot be used in ordinary soldering-iron heaters.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

Dividing the interior of the stove or fire-pot by a perforated division or partition plate *d*, in combination with the divided exit flue *e*, and its damper *g*, substantially as and for the purpose described.

We also claim the bent arm and weight *k m*, in connection with the hinged lid E, as and for the purpose described and represented.

C. A. BUTTLES,  
JAMES COWLES.

Witnesses:

FREDK. S. BUTTLES,  
TIMOTHY O'BRIEN