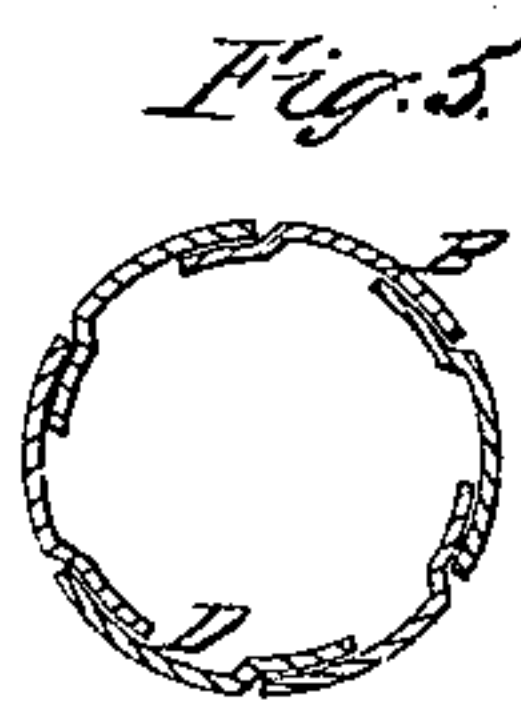
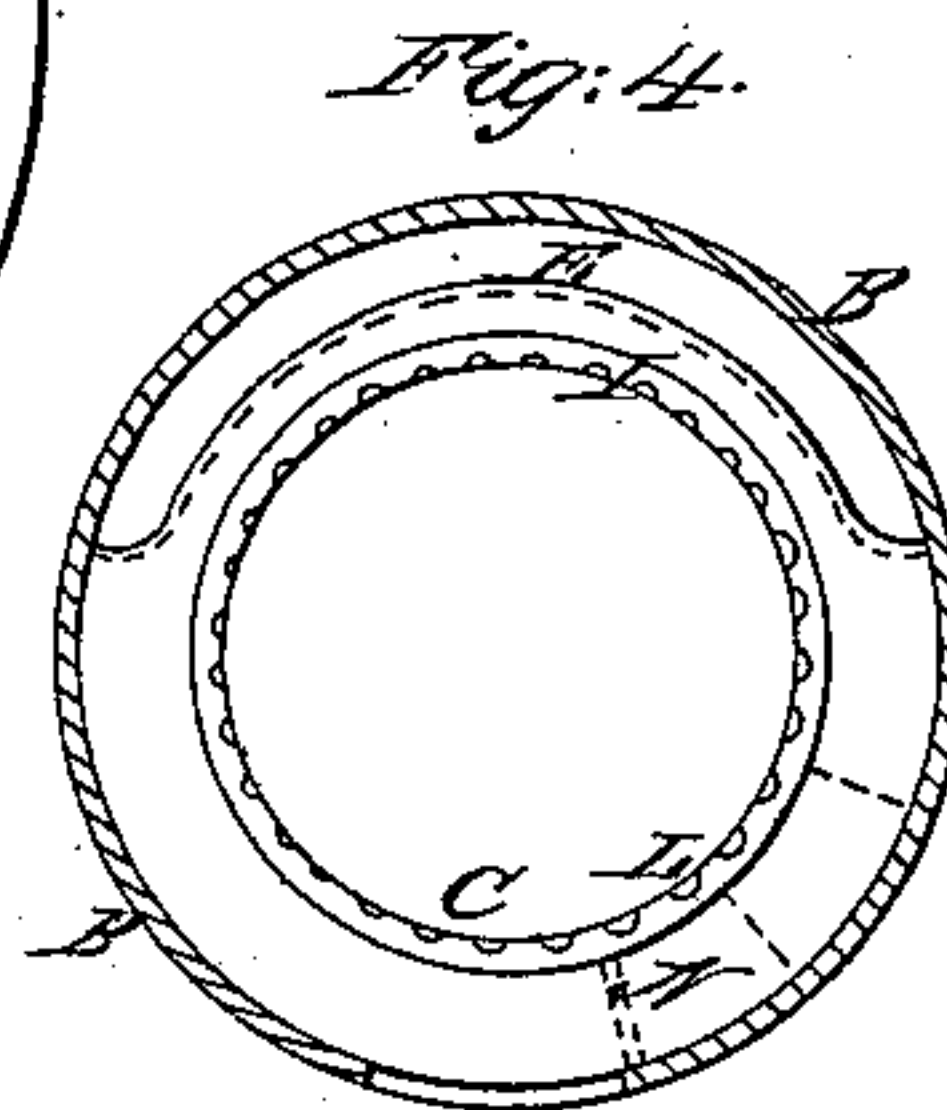
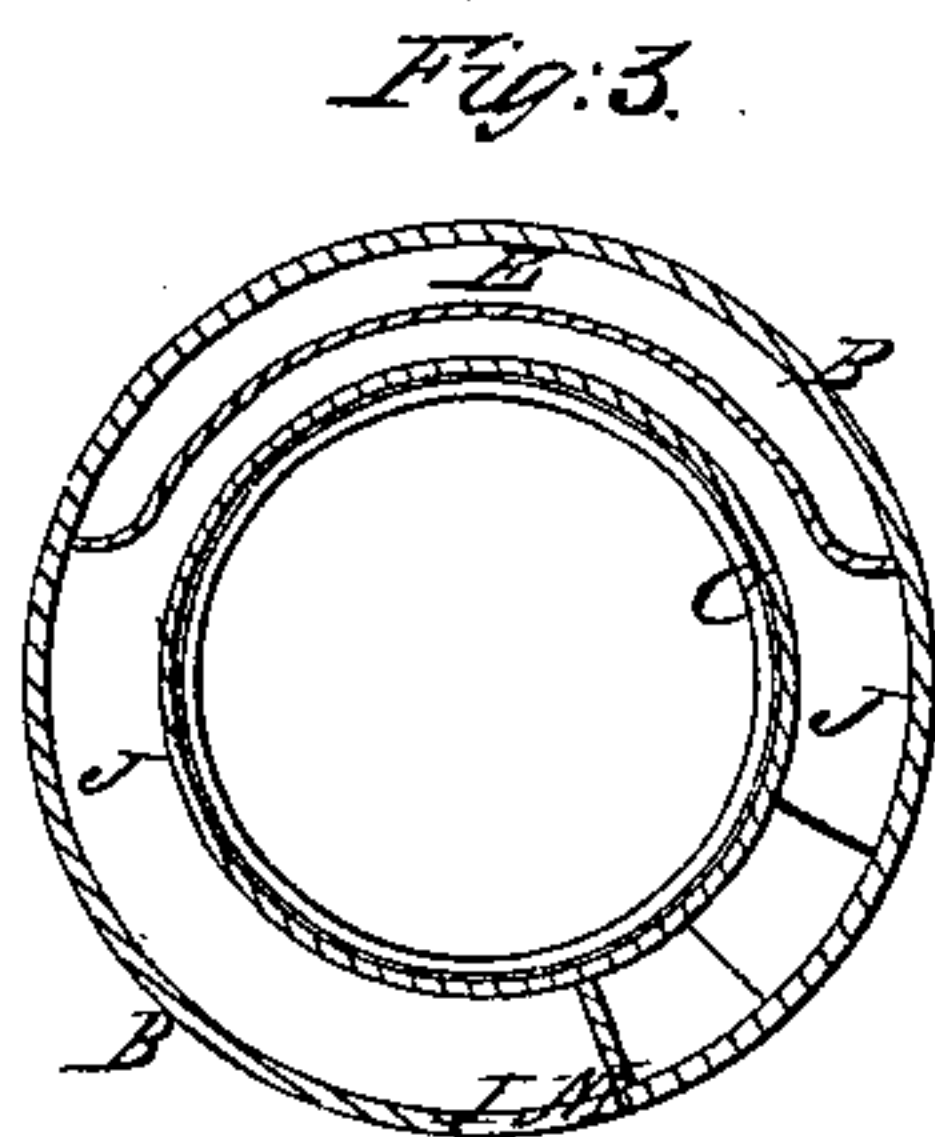
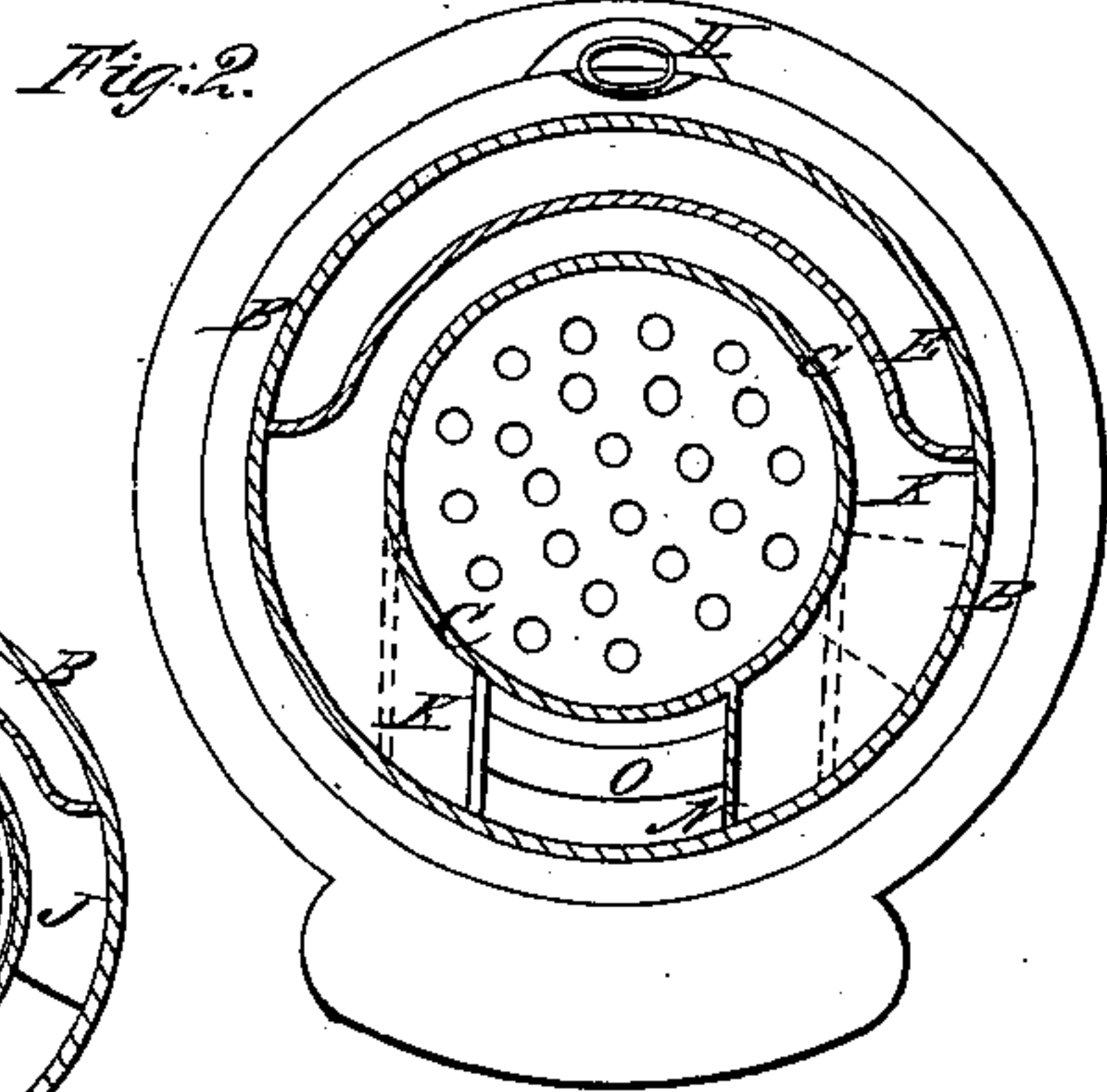
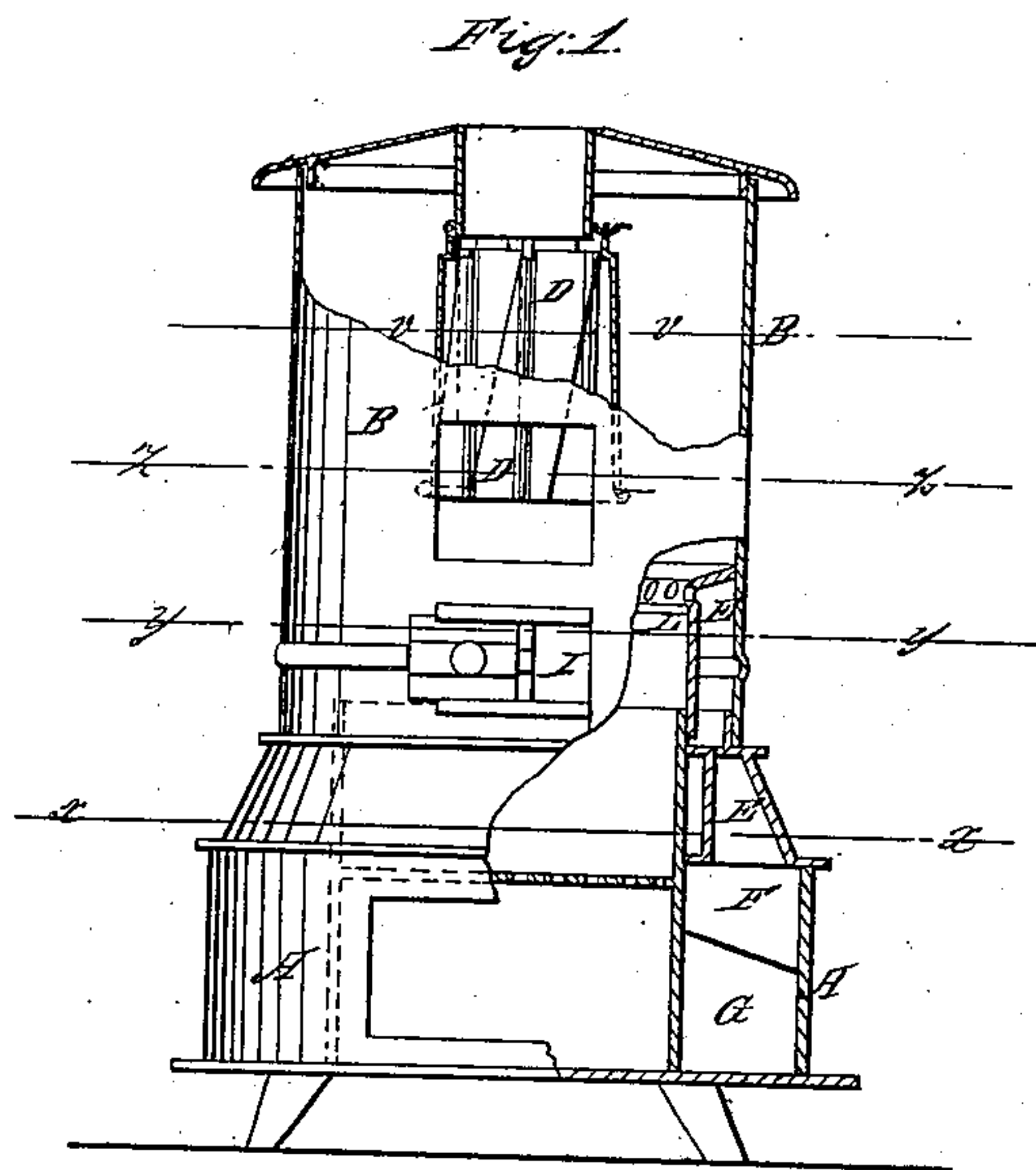


J. H. GOODFELLOW.
BASE BURNING STOVE.

No. 100,138.

Patented Feb. 22, 1870.



Witnesses:
A. W. Almqvist
Alex F. Roberts

Inventor:
John H. Goodfellow
PER *Mumma*
Attys

United States Patent Office.

JOHN H. GOODFELLOW, OF TROY, NEW YORK, ASSIGNOR TO HIMSELF
AND R. S. GOODFELLOW, OF SAME PLACE.

Letters Patent No. 100,138, dated February 22, 1870.

BASE-BURNING STOVE.

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

To all whom it may concern:

Be it known that I, JOHN H. GOODFELLOW, of Troy, in the county of Rensselaer, and State of New York, have invented a new and useful Improvement in Stoves; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a front view of a parlor-stove to which my improvements have been attached, parts being broken away to show the construction.

Figure 2 is a horizontal section of the same, taken through the line *x x*, fig. 1.

Figure 3 is a horizontal section of the same, taken through the line *y y*, fig. 1.

Figure 4 is a horizontal section of the same, taken through the line *z z*, fig. 1.

Figure 5 is a detail horizontal section of the expanding feeder, taken through the line *v v*, fig. 1.

My invention has for its object to improve the construction of heating-stoves with respect to supplying them with coal and with air to support combustion, it being designed to supply the fire-box with a current of heated air, whereby combustion is facilitated and an economy of fuel effected; and

It consists in the construction of the feeder and of the draught-flue as hereinafter more fully described.

A represents the base of the stove;

B, the upper part or cylinder; and

C, the fire-box.

D is the expanding feeder, which is made in two or more parts or pieces, the edges of which are so formed as to overlap each other, as shown in figs. 1 and 5. The parts or pieces of the feeder D are hooked, hinged, pivoted, or otherwise suspended from the top of the stove or from the lower end of a short feed-pipe, projecting downward from said top. I prefer to suspend the parts of the feeder D detachably, so that they may be conveniently detached and removed when desired or necessary. If desired, one or more of the parts of the feeder D may be made stationary, and the other parts movable. The parts of the feeder D may be pivoted otherwise than at their upper ends, but I prefer the construction first described, as being simpler and more convenient. By this construction of the feeder, when the coal placed in it expands from becoming heated, the lower part of the feeder D is expanded or forced outward, to give increased room to the coal, and so that the coal will not choke up the feeder, but will be free to pass down to the fire-box as it is required to support combustion.

The smoke and other products of combustion pass from the fire-box C down the flue E, at the rear of the stove, to the base A, where they pass forward

through the flue F, and back through the flue G to the pipe H, having parted with the greater part of their heat before entering said pipe H.

The air to support combustion passes in through an opening, I, in the front part of the stove, above the center of the fire-box C. It then passes around the fire-box C, and down through an opening formed in or at the end of the flue-strip J, as shown in fig. 3, and back around the lower part of the fire-box, and down through an opening formed in or at the end of the flue-strip K, into the ash-pit, whence it passes through the grate to the fire.

The air is made to pass down through the openings in the flue-strips J and K by vertical strips M and N, respectively, which cross the flues formed by the said flue-strips J and K, and thus interrupt the onward passage of the air.

L is the gas-ring formed around the upper edge of the fire-box C, through which air may pass into the upper part of the fire-box. By enlarging the openings in the gas-ring L, so as to admit sufficient air to support combustion, the stove may be arranged to burn with a down draught.

The flue-strips J are so arranged as to bring the air to support the draught in contact with the entire surface of the fire-box C, and detain it in contact with said fire-box until it may be entirely heated. The flue-strips J may be formed solid with the fire-box C, or they may be made separate and detachable, as may be desired or most convenient.

The opening in the case of the stove through which the air enters the flues formed by the flue-strips J may be furnished with dampers, to regulate the draught of the stove, or the said draught may be regulated by a damper placed in the smoke-pipe.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. The combination of a detachable expanding feeder with the case and fire-box of a stove, substantially as herein shown and described and for the purpose set forth.

2. The detachable expanding feeder D, constructed substantially as herein shown and described, in combination with the case or cylinder B and fire-box C, as and for the purpose set forth.

3. The flue-strips J, whether placed in vertical or horizontal directions, in combination with the fire-box C and lower flue-strips or flange K, and so arranged as to receive the air to supply the draught above the central line of the fire-box, and conduct it one or more times about said fire-box before it escapes through openings in the lower flue-strips or flange K, into the ash-pit below the grate, substantially as herein shown and described and for the purpose set forth.

4. The gas-ring L, formed with an inward projection or swell around the upper edge of the fire-box, in combination with the flue-strips J and K and with said fire-box, substantially as herein shown and described and for the purpose set forth.

5. The vertical strips M and N, in combination with the flue-strips J and K and fire-box C and outer case B, substantially as herein shown and described and for the purpose set forth.

6. The opening O formed in the flue-strip K, at the front of the fire-box C, and communicating with the ash-pit, substantially as herein shown and described and for the purpose set forth.

7. The combination of dampers placed in the front and sides of the stove, either or both, with the sets of flue-strips J K and M N, or either of them, substantially as herein shown and described, to regulate the draught of the stove, as set forth.

The above specification of my invention signed by me this 9th day of November, 1869.

JOHN H. GOODFELLOW.

Witnesses:

GEO. W. MABEE,

JAMES T. GRAHAM.