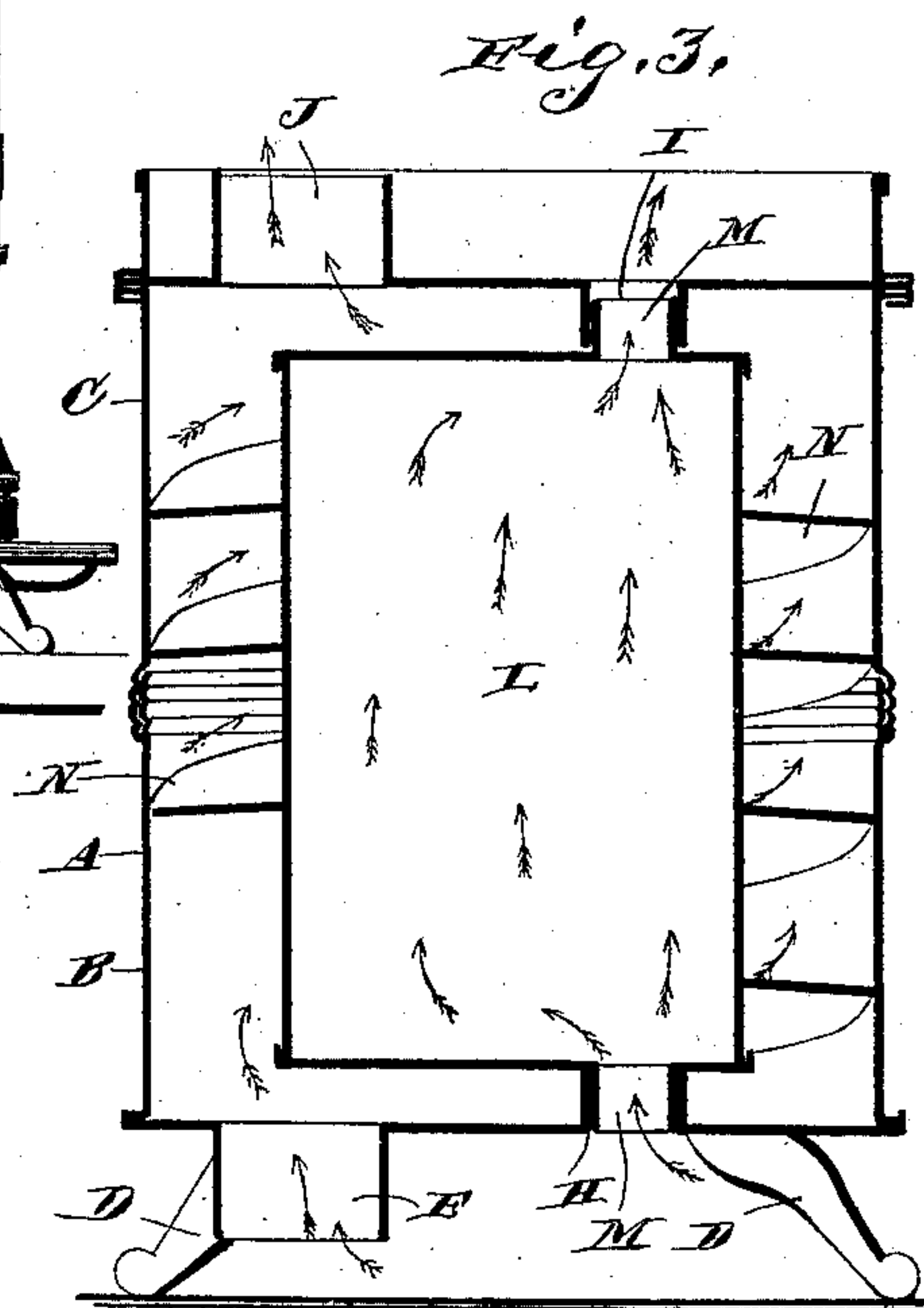
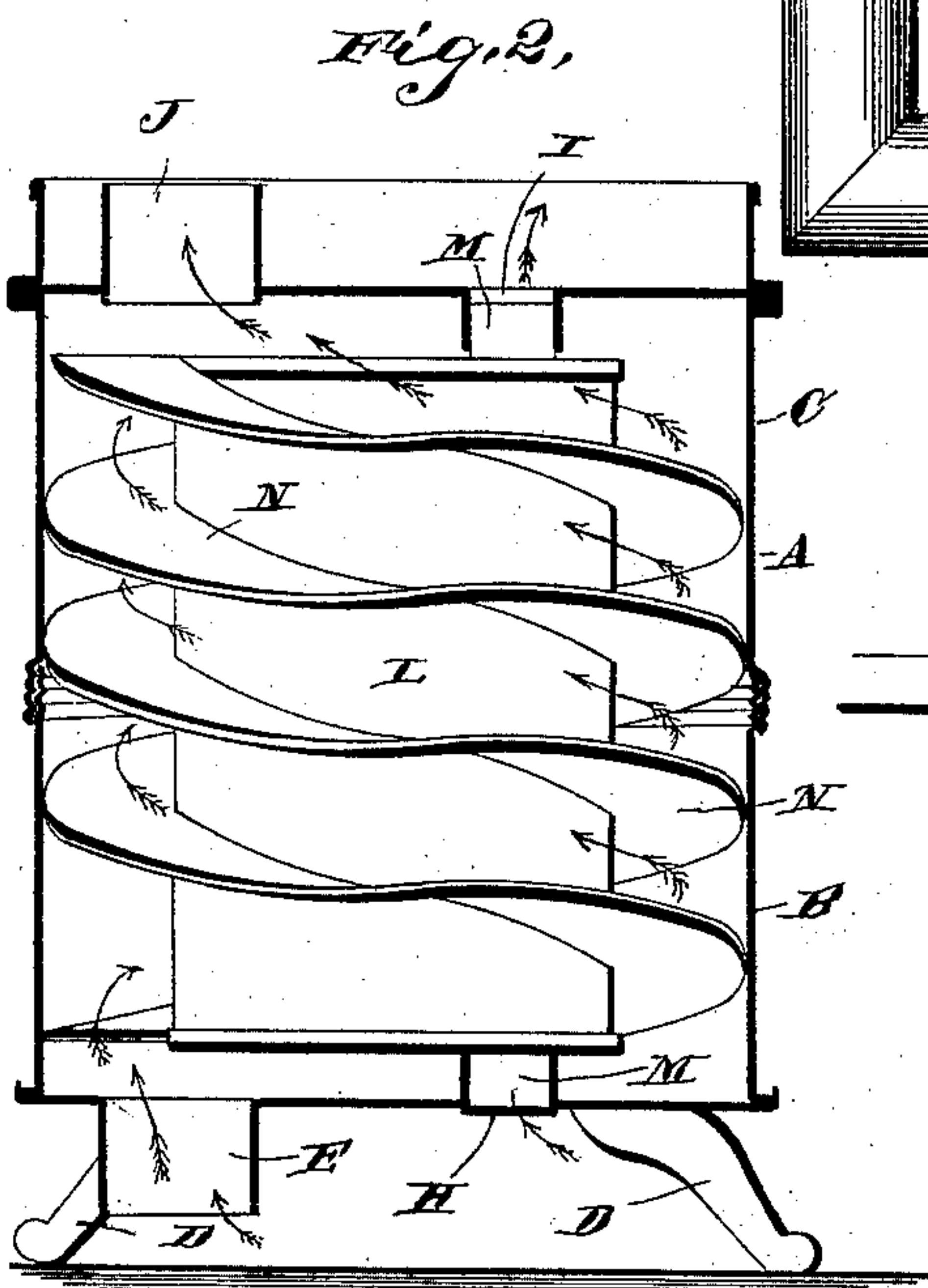
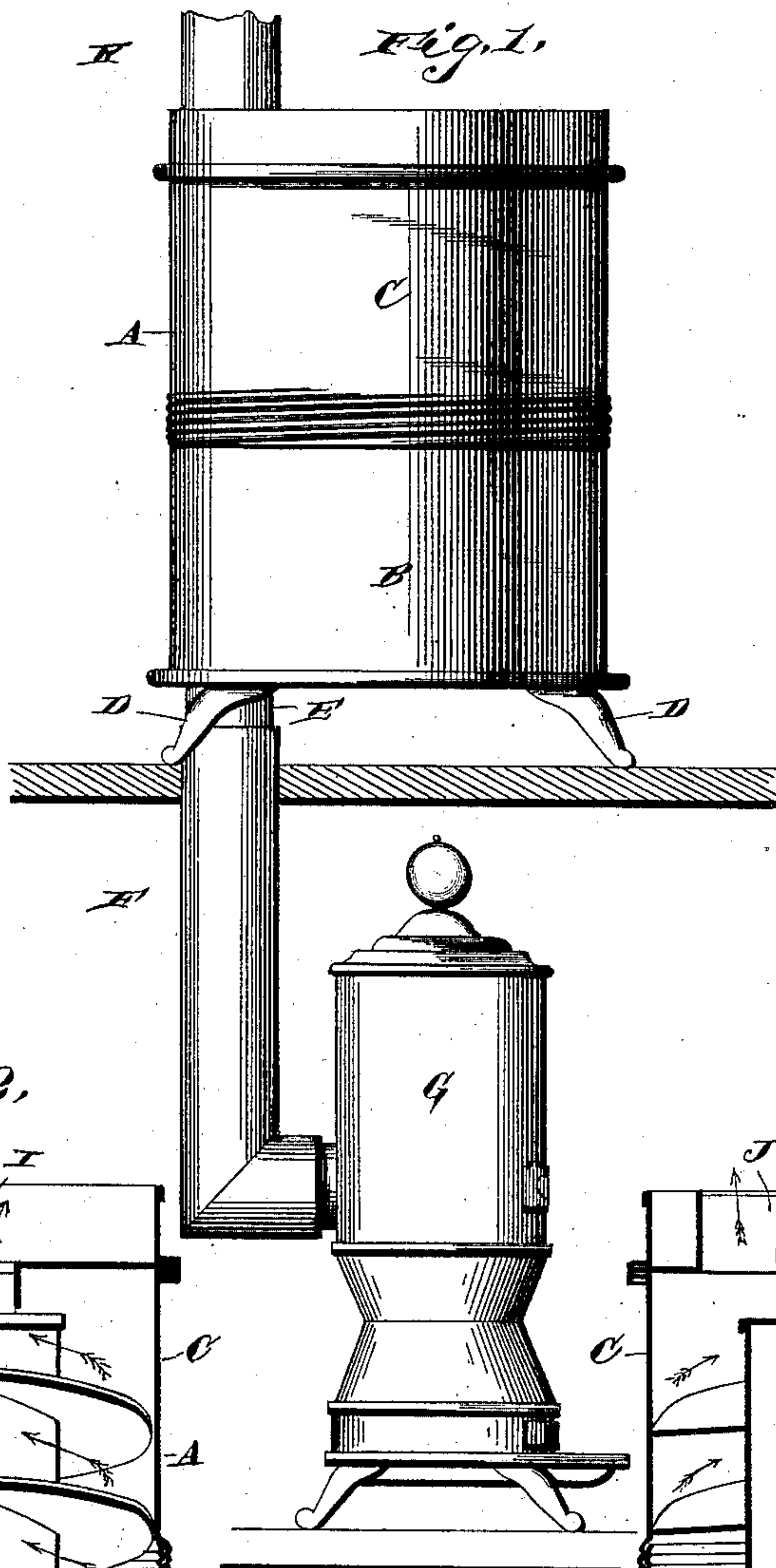


(No Model.)

I. H. FRY.
HEATING DRUM.

No. 387,715.

Patented Aug. 14, 1888.



Witnesses.
C. S. Taylor,
A. W. Bishop.

Inventor.
Isaac H. Fry.
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Attorneys.

UNITED STATES PATENT OFFICE.

ISAAC H. FRY, OF TOWER CITY, DAKOTA TERRITORY, ASSIGNOR OF ONE-HALF TO ELISHA J. WHITTLESEY, OF SAME PLACE.

HEATING-DRUM.

SPECIFICATION forming part of Letters Patent No. 387,715, dated August 14, 1888.

Application filed December 16, 1887. Serial No. 258,118. (No model.)

To all whom it may concern:

Be it known that I, ISAAC H. FRY, a citizen of the United States, residing at Tower City, in the county of Cass and Territory of Dakota, have invented a new and useful Improvement in Heating-Drums, of which the following is a specification.

My invention relates to improvements in heating-drums; and it consists in certain novel features, hereinafter described and claimed.

In the drawings referred to, Figure 1 is an elevation of the device in its operative position. Fig. 2 is a central vertical section of the outer cylinder, the inner one being shown in elevation. Fig. 3 is a vertical section of the heating-drum.

A designates the outer cylinder or casing, which is made in two sections, B C, the upper section, C, being removably fitted on the lower section, B, by a threaded connection, as shown. The lower section, B, is provided on its bottom or lower closed end with suitable supporting-legs, D, which rest on the floor of the room and thereby support the device. The said section B is also provided with a depending pipe, E, which communicates with the upper end of the stove-pipe F, leading from the stove G, which is located in the room below that containing the heating-drum. The bottom of the section B is also provided with an inlet-opening, H, through which cold air is admitted into the inner cylinder, as will be presently described. The upper section, C, of the cylindrical casing is provided with an outlet-opening, I, through which the warm air escapes into the room, and it is also provided with a vertical collar, J, which connects with the smoke-pipe K, as clearly shown. The inner cylinder, L, is provided at its opposite ends with the vertical pipes M, which communicate with the inlet and outlet openings H I of the outer cylinder. This inner cylinder is further provided with a spiral flange, N, which extends outward to the outer cylinder, thereby forming a tortuous passage between the two cylinders, through which the smoke and waste heated air from the stove pass. This spiral flange is bent slightly downward toward its outer edge, thereby confining the waste heated air a longer time than it otherwise would be confined.

In practice the smoke and heated air escaping from the furnace or stove pass into the chamber between the two cylinders, and in their tortuous passage through said chamber heat both of said cylinders. The outer cylinder then radiates heat and the body of air in the inner cylinder is heated and escapes from the same through the upper pipe M. At the same time cold air passes into the said inner cylinder through the lower pipe M, and is in its turn heated, and then passes out at the top of the device. It will thus be seen that a constant and direct circulation of the air in the room is maintained. When it is desired to clean or repair any of the interior parts of the device, the upper section of the outer cylinder is removed from the lower section thereof and the inner cylinder removed from the device. All the parts are thus rendered accessible and can be thoroughly cleaned or repaired. Besides thus facilitating the removal of the inner cylinder for the purpose of cleaning and repairs, it will be seen that if the inner cylinder be imperfectly constructed, so as not to fit perfectly within the outer cylinder, the said outer cylinder, by reason of its sectional construction, can be adjusted to clamp the said inner cylinder firmly in position.

It will be readily seen that I have provided a very simple and efficient device, and its advantages will, it is thought, be readily appreciated.

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

1. In a heating-drum, the combination of the outer cylinder composed of two sections detachably united, and the inner cylinder having an external spiral flange extending to the side of the outer cylinder, as set forth.

2. In a heating-drum, the combination of the outer cylinder, having inlet and discharge openings in its ends and composed of two sections having a screw-thread connection, and the inner cylinder, having the pipes M at its ends and having an external spiral flange projecting to the side of the outer cylinder, as set forth.

3. The improved heating-drum herein described and shown, comprising the outer cylinder, provided at its ends with the openings

H I and the inlet and discharge pipes E J, and composed of two sections united by a screw-thread connection, and the inner cylinder, having the pipes M at its ends, engaging
5 the openings H I, and provided with the external spiral flange projecting to the side of the outer cylinder, as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ISAAC H. FRY.

Witnesses:

MARTIN H. KEIFF,
RICHARD P. SHERMAN.