(No Model.)

M. VAN WORMER.

STOVE.

No. 339,355. Patented Apr. 6, 1886.

Fig. 1.

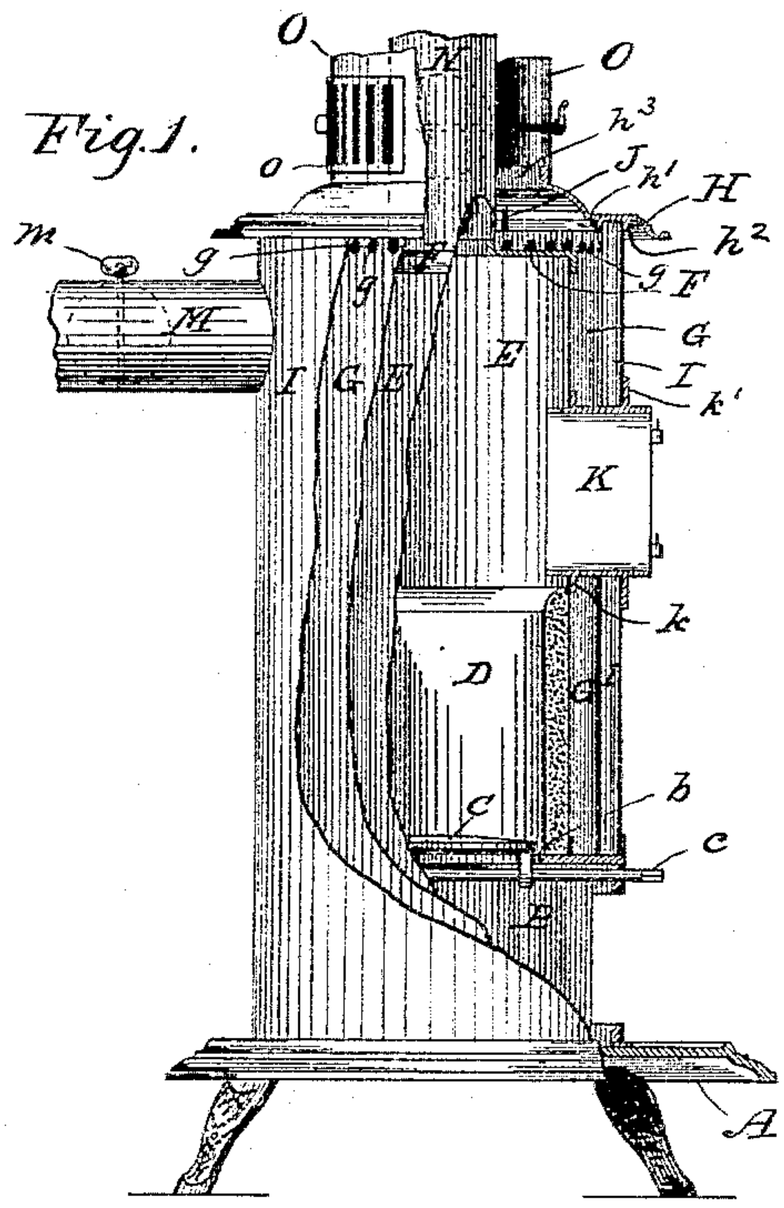


Fig. 2.

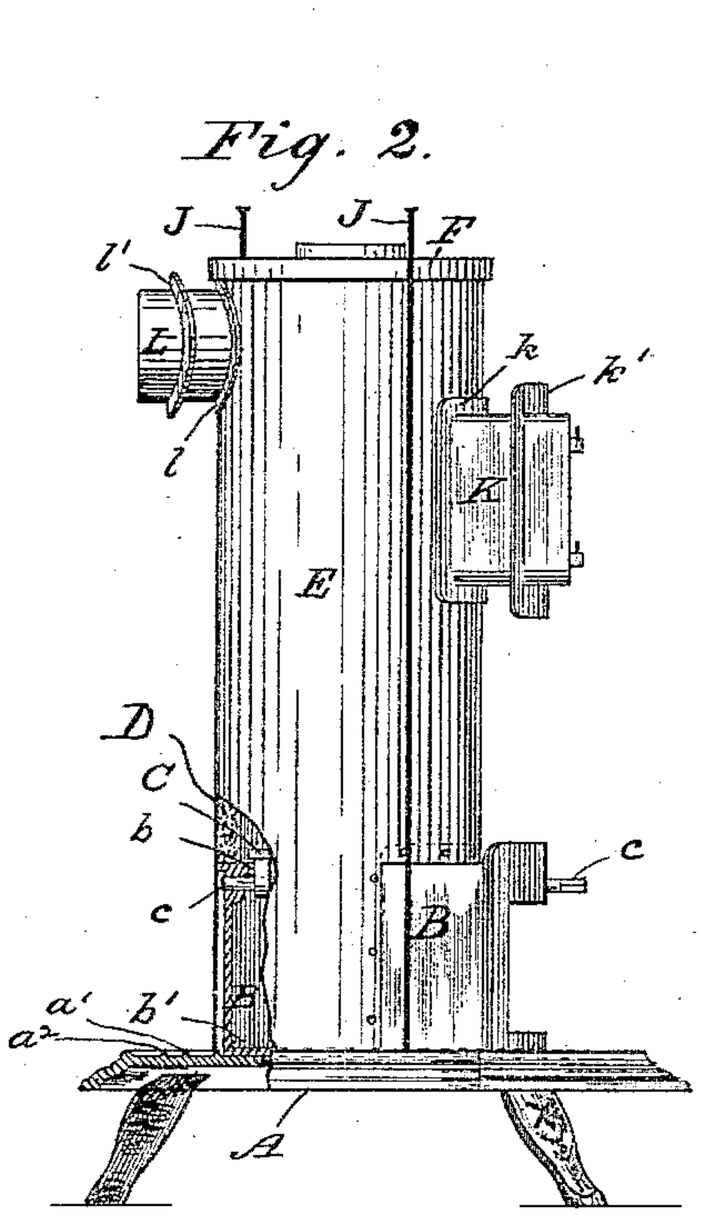


Fig. 3.

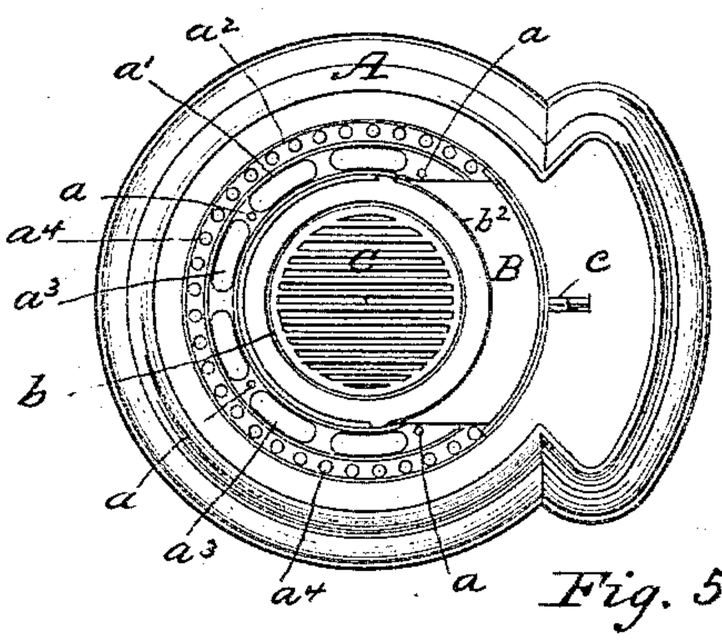


Fig. 4.

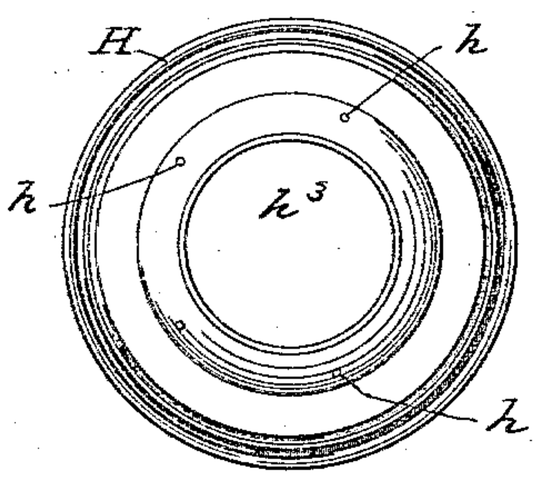
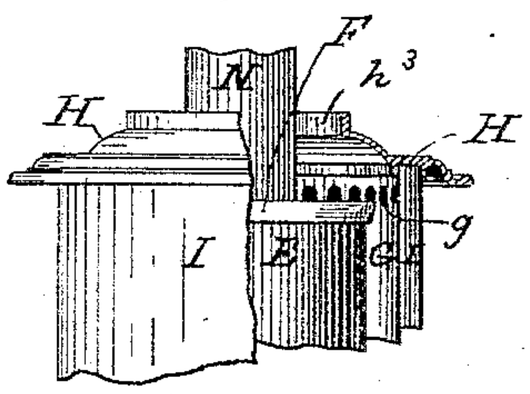


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

MATTHEW VAN WORMER, OF MALDEN, MASSACHUSETTS.

STOVE.

SPECIFICATION forming part of Letters Patent No. 339,355, dated April 6, 1886.

Application filed August 26, 1885. Serial No. 175,362. (No model.)

To all whom it may concern:

Be it known that I, MATTHEW VAN WORMER, a citizen of the United States, residing at Malden, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Stoves, of which the following is a specification.

My invention relates to heating-stoves.

The object of my invention is to provide a stove which may be of sufficient capacity to furnish heat for two or more rooms without furnishing an excess of heat in the room in which said stove may be placed.

My invention consists in details of construction described below, and pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side view, partly in broken section, chiefly showing the arrangement of the radiating-cylinder, the drums, the base-plate, and the ash-box, and the manner of disposing of the heated air at the top of the stove. Fig. 2 is a detail view, partly in broken section, showing the radiating-cylinder, the ash-box, and the base-plate. Fig. 3 is a detached plan view of the base-plate, having the ash-chamber provided with a dumping-grate in position thereon. Fig. 4 is a plan view of the top plate of my improved stove, showing holes in which the stay-rods are placed. Fig. 5 is a detail view, partly in broken section, of the upper part of the stove.

Similar reference-letters indicate corresponding parts throughout the several views.

The base-plate A is supported by ordinary feet and may be made of any ornamental design. Upon its center rests the ash-chamber B. This is preferably cast in one piece, and a little oblong in form from front to back, the back being semicircular and the front curvilinear to correspond with the outer cylinder of the stove. Concentric with the back of the ash-chamber B, and in the top thereof, is formed an opening, *b*, into which the grate C is placed and supported by a suitable shaking and dumping bar, *c*, which is hung in bearings formed in the front and back of said ash-chamber, just below the top thereof.

The ash-chamber may be formed open at the bottom and the base-plate serve for its bottom, or it may be provided with a bottom, *b'*, as seen in the drawings. Upon the top of this ash-chamber rests the fire-brick or lining D for the stove, and surrounding this lining is the radiating-cylinder E, provided in front with an opening for the entrance of fuel, located just above the lining D, at the back with an opening for a smoke-pipe, and having a cover or top plate, F. This cylinder E at its lower end in front terminates at the top of the ash-chamber B, where it is riveted or otherwise secured to a flange, b^2, projecting upward from said ash-chamber. The back part of said cylinder extends down to the base-plate A, the sides of this extension being secured by stove-bolts to the vertical sides of the ash-chamber, as seen in Fig. 2.

Surrounding the ash-chamber and the cylinder E is a drum, G, of three inches (more or less) larger diameter than said radiating-cylinder E. This latter drum G extends from the base A to an outer top plate, H. An exterior drum, I, of two inches (more or less) larger diameter than the said drum G, is placed over all, and extends from the base-plate to the outer top plate, H, and stay-rods J are provided for securing said top plate and said exterior drums to the base-plate A. Like stay-rods may also be used for staying the plate F. There may be two or more of these stay-rods J, which pass through the holes *h* in the top plate, H, thence between the cylinder E and drum G, and through the holes *a* in the base-plate A, where they may be provided with a thread and nut for clamping the parts securely together. Annular ridges a' a^2 are provided on the base-plate A for steadying, respectively, the drums G I, the tops of which are held in their respective places by the flanges h' h^2, formed upon the under side of the outer top plate, H.

The base-plate A is perforated with suitable openings, a^3 a^4, for the admission of cool air into the chambers formed by the drums G I—*i. e.*, the openings a^3 admitting air to the drum G and the openings a^4 connecting with the drum I.

The drum G is provided with openings *g* near its top, for the escape or discharge of the air circulating through the drum I.

A casing, K, is provided as a fuel-passage through the several cylinders to the fire-pot.

This is provided with flanges *k k'*, of proper form to fit the cylinders E I, respectively, to which they may be riveted or otherwise secured.

A short pipe, L, passing through the several cylinders, may be secured to the inner and outer cylinder by suitable flanges, *l l'*, cast thereon, and its outer end be adapted to receive an ordinary sheet-iron smoke-pipe, M, provided with a damper, *m*.

The outer top plate, H, is provided with an opening, h^3, for discharging the air circulating through the cylinders G I.

The top plate, F, may have a central opening to which may be connected a smoke-pipe, N, in place of discharging the products of combustion at the back of the stove through a pipe, M, which in the latter case may be dispensed with.

When this stove is in operation, the air entering the opening a^4 of the base-plate A passes upward through the cylinder I (becoming more or less heated during its progress) and through the openings *g*, near the top of the cylinder G, where it mingles with the air passing out from the latter cylinder. All of said air passing directly over the inner top plate, F, of the radiating-cylinder E becomes thoroughly heated before escaping through the opening h^3 of the outer top plate, H. If desired, this opening h^3 may connect with an air conductor or pipe, O, for conducting the heated air to an apartment overhead, and a suitable slide, *o*, may be provided in this pipe for the purpose of letting some of this heated air out into the apartment in which the stove is placed, if at any time required.

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

1. The combination, with the base-plate A, having perforations a^3 a^4, of the ash-box B, the lining D, supported on said ash-box, the radiating-cylinder E, having plate F, the drum G, perforated circumferentially at *g g*, the drum I, and the top plate, H, as and for the purpose set forth.

2. The combination of the base and fire-pot of a stove with cylinder E, having plate F and smoke-pipe N, the drum G, perforated at *g g*, the drum I, the top plate, H, and the air-pipe O, having slide *o*, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MATTHEW VAN WORMER.

Witnesses:
A. F. SARGENT,
L. E. LAWTON.