

J. H. GOODFELLOW.

Magazine Stove.

No. 89,141.

Patented April 20, 1869.

Fig: 1.

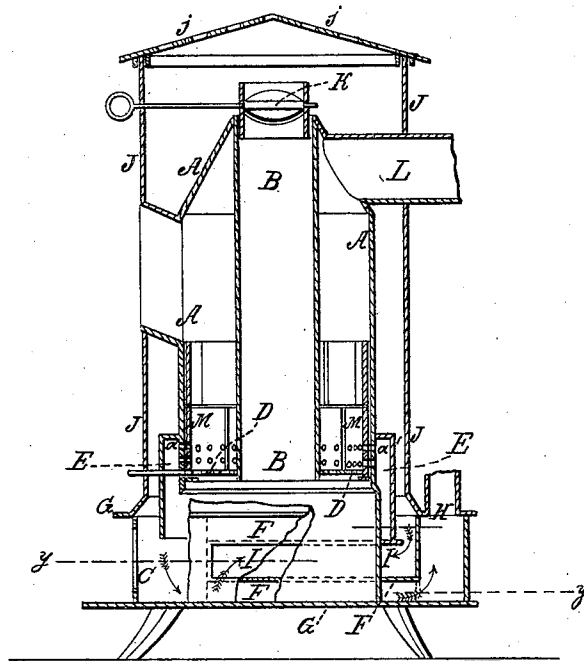
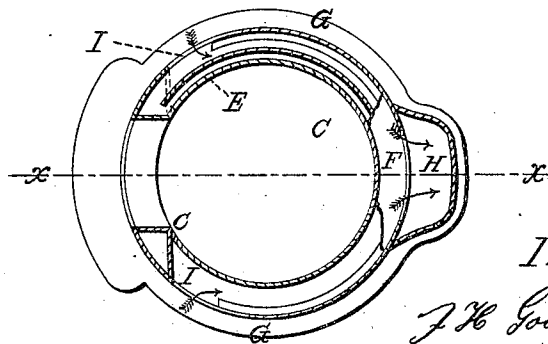


Fig: 2.



Witnesses:
Chas. Nida
John H. Brooks

Inventor;
J. H. Goodfellow
Mum & Co

United States Patent Office.

JOHN H. GOODFELLOW, OF TROY, NEW YORK.

Letters Patent No. 89,141, dated April 20, 1869.

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 improved Heater; 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 detail vertical section of my improved heater, taken through the line *x x*, fig. 2, part being broken away to show the construction.

Figure 2 is a detail sectional view of the same, taken through the broken line *y y*, fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved base-burning heater, simple in construction and effective in operation, utilizing almost entirely the heat in the products of combustion, before they escape into the chimney; and

It consists in the construction and combination of the various parts of the heater, as hereinafter more fully described.

A is the body, or inner case of the heater, through the centre of which passes a vertical pipe, B, the lower end of which opens into the ash-pit C, and the upper end of which passes out through the top of the said body A.

The lower part of the body A should be lined with perforated fire-brick, M, to form the fire-pot *a*, and which is provided with a ring-grate, D, so constructed that it may be shaken and dumped with the same facility as other grates.

From the fire-chamber *a* the products of combustion pass through the perforations in the sides of said chamber into a space, or flue, E, extending around the rear and sides of the lower part of the said fire-chamber *a*, and the upper part of the ash-pit C.

At the forward side of the heater, the flue E communicates with the flue F, in the lower part of the base G of the heater, and extending around the sides and rear of the ash-pit C.

At the rear of the stove, the flue F communicates with the flue H, through which the products of combustion, by this time almost entirely deprived of their heat, pass to the chimney.

Between the flues E and F is formed the air-flue I, into which the air passes, through openings in the outer case of the base G, as shown in fig. 2, and from which the air passes up along the outer side of the flue E, into the space between the body A, of the heater, and the outer case J, where it becomes still further heated,

and escapes into the room, through holes in the top, or cap *j*, of the outer case J.

The air may also be allowed to enter the space, or chamber, between the body A and case J, through holes in the lower part of said case.

The air that passes up through the interior pipe B enters the lower end of said pipe, through the ash-pit C, and escapes, from the upper end of said pipe, into the upper part of the heater, or it may, if desired, be conducted away by pipes connected with the upper end of the said pipe B, and used for heating other rooms.

The upper end of the pipe B should be provided with a damper, K, which should be closed when the grate D is dumped or shaken, to prevent the ashes from being carried up through the said pipe B.

L is a pipe, leading from the upper part of the body A, directly to the chimney-flue, and which should be provided with a damper.

The products of combustion are allowed to escape through the pipe L, when starting the fire, or whenever a direct draught is required.

At other times the damper in the pipe L should be closed when the heater acts as a base-burner.

The air to support combustion may be introduced through the door leading into the ash-pit, or through the door through which the fuel is introduced, or through both at the same time, as may be desired, or convenient.

Having thus described my invention,

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

1. The combination of the interior pipe B, extending down through the fire-box *a*, body A, smoke-flues E F, and cold-air flue I, with each other, substantially in the manner herein shown and described, and for the purpose set forth.

2. Interposing the cold-air flue I between the smoke-flues E and F, substantially as herein shown and described, and for the purpose set forth.

3. Perforating the lower part of the brick lining and the side wall of the fire-chamber, for the passage of the products of combustion into the flue E, substantially as herein shown and described.

4. The annular fire-chamber *a*, formed by the combination of the central air-pipe B, ring-grate D, and perforated side-walls M, with each other, substantially as herein shown and described, and for the purpose set forth.

The above specification of my invention, signed by me, this 4th day of February, 1869.

Witnesses: JOHN H. GOODFELLOW.
FRANK BLOCKLEY,
JAMES T. GRAHAM.