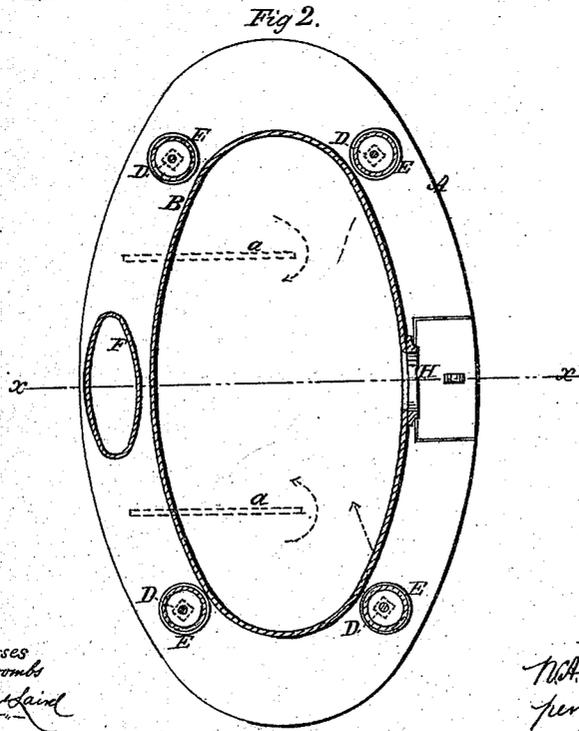
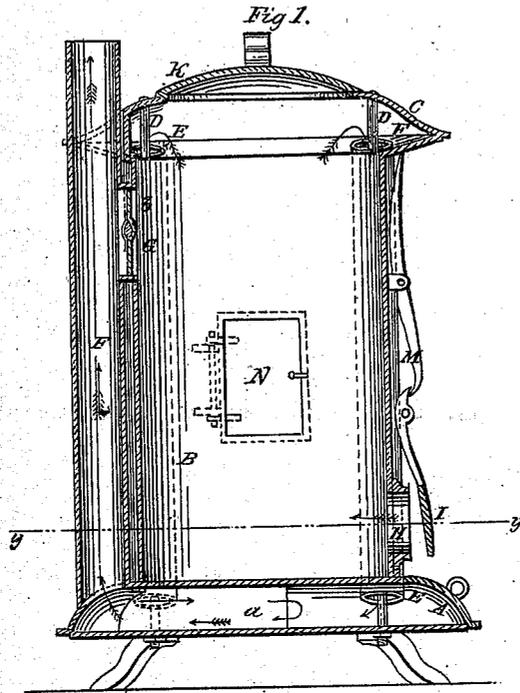


W. A. BARLOW.
Heating Stove.

No. 35,494.

Patented June 3, 1862.



Witnesses
J. Woodcomb
James Laird

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UNITED STATES PATENT OFFICE.

WILLIAM A. BARLOW, OF ELKHORN, WISCONSIN.

IMPROVEMENT IN STOVES.

Specification forming part of Letters Patent No. 35,494, dated June 3, 1862.

To all whom it may concern:

Be it known that I, WILLIAM A. BARLOW, of Elkhorn, in the county of Walworth and State of Wisconsin, have invented a new and useful Improvement in Stoves; and I do hereby declare that the following is 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 is a vertical section of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a horizontal section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

My invention consists in constructing and combining together the several parts herein-after claimed to accomplish the following objects in the same stove: First, a stove with an opening in the top as large as the body of the stove; second, that it will admit of using a self-regulator in front and a door in the end; third, a stove that is easy of construction, cheap, and so that all the parts that are exposed to the severe heat will come in contact with the atmosphere, consequently making it durable; fourth, double top and base; fifth, the use of four tubes or pipes connecting with the top and base by a flange on the top of the base and a flange on the under side of the top for the heat to pass down; sixth, a large pipe behind connected with the base by a flange and connected with the body of the stove near the top by a pipe which has a damper in it, making in all five pipes which are outside of the body of the stove and separate from it except as above stated; seventh, placing the rods that hold the parts together through the tubes to prevent them from burning out; eighth, the use of two partition-plates in the base, one on each side of the smoke-pipe; ninth, it has for its object the saving of wood.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the base of the stove, which is hollow; and B is the body of the stove, which may be of oval or cylindrical form.

C is the top plate or cap of the stove, which is provided with an opening and cover, K, directly over the body of the stove, the same size of the body, to admit of putting in of larger wood than can be got in at the door; also, to ad-

mit of heating water or other substances; also, to admit of replacing the lining, when burned out, without taking the stove apart—which is so troublesome in other stoves—which cap, like the base A, projects beyond the body B, all around it, and is connected to the body by rods D, which pass vertically through the top plate, C, and base A, and also pass through vertical tubes E, which are at the outer side of the body B of the stove, two tubes being at each side, as shown in Fig. 2, and so situated as to admit of a door, N, in the end and the use of a self-regulator, M, in front. The upper and lower ends of the tubes E communicate with the base A and with the cap C, the upper ends of the tubes being in close proximity to the upper end of the body B and communicating with it.

In the base A there are placed two vertical partition-plates, *aa*, which extend rather more than half-way across the base A. These partition-plates are placed one at each side of the lower part of the smoke-pipe F, where it communicates with the base A. (See Fig. 2, in which the partition-plates are shown by dotted lines.) The smoke pipe F communicates with the body B of the stove, as shown at *b*. This opening, however, has a damper, G, in it for cutting off the communication when desired. In the front part of the body B there is a draft-opening, H, provided with a valve, I.

The operation is as follows: When a direct draft is required, as in kindling the fire, the damper G is opened and the products of combustion pass directly into the smoke-pipe F. When a circuitous draft is required for the radiation of heat, the damper G is closed and the products of combustion pass down the tubes E at both sides of the body B and into the base A, and thence between the two partitions *aa* into the lower end of the smoke-pipe F. (See arrows.) By this arrangement heat is radiated from the four tubes E, and the products of combustion in passing through the base A are distributed evenly through it, so that the heat will be radiated all around the base. In consequence of having the tubes E arranged as shown—to wit, two being at each side of the body B—the cap of the stove will be evenly heated throughout its entire surface, and therefore prevented from cracking on account of unequal expansion and contraction—a result of frequent occurrence in ordinary stoves. By having the rods D, which

connect the several parts of the stove together, pass through the tubes E the rods are protected from the extreme heat to which they would be subjected within the body B of the stove, and the rods are at the same time entirely excluded from view. This position of the rods prevents the parts of the stove becoming loose at the joints—a contingency which occurs in a greater or less degree in ordinary stoves in consequence of the great heat to which the rods are subjected, the heat expanding the rods sufficiently to produce such result.

I do not claim separately any of the parts herein described; but

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

The combination of the four tubes E E E E, cap C, body B, opening and cover K, door N, damper G, opening H, valve I, or in place thereof self-regulator M, with hollow base A, with partitions *a a*, flue F, and connecting-rods D, in the manner herein shown and described, all being arranged as and for the purpose set forth.

WM. A. BARLOW.

Witnesses:

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