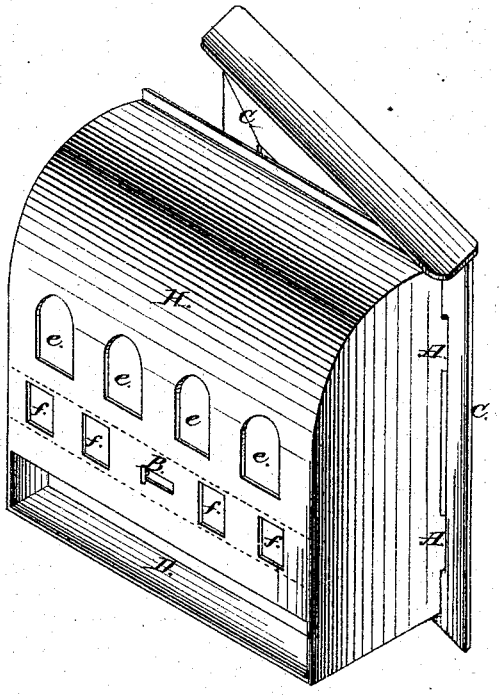
ELIZABETH HAWKS.

Air-Chamber for Stoves.

No. 160,519. Patented March 9, 1875.



Witnesses:

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UNITED STATES PATENT OFFICE.

ELIZABETH HAWKS, OF TROY, NEW YORK.

IMPROVEMENT IN AIR-CHAMBERS FOR STOVES.

Specification forming part of Letters Patent No. **160,519**, dated March 9, 1875; application filed November 28, 1874.

To all whom it may concern:

Be it known that I, ELIZABETH HAWKS, of the city of Troy, county of Rensselaer and State of New York, have invented a new and useful Mode of Constructing Air-Chambers for Stoves, Furnaces, and Heaters, of which the following is a full, clear, and exact description, reference being had to the drawings herewith, which form a part of this specification.

This invention relates to that class of devices known as auxiliary air-chambers, and used for the purpose of heating the air before it passes into the fuel-chamber.

I am aware that similar devices have been in use for some years, and that patents have been granted for such devices, but in their important features they are essentially different from my invention. They are generally constructed in form and size of sufficient depth to cover or inclose only the draft-damper of the stove, affording a very limited space or reservoir for heated air, which becomes immediately exhausted on opening the draft-damper of the air-chamber, and, as the draft is direct from the room through the air-chamber into the fuel-chamber or fire-box, there is no opportunity for heating the air so long as the draft-damper remains open, except in its passage between the moderately-heated plates of the air-chamber. Further, when the draft-dampers of those air-chambers are closed, nearly the entire front of the stove shows no light or fire, which makes a gloomy and unpleasant front. To obviate these difficulties is the object of my invention.

The figure is a view in perspective, showing my air-chamber with its mica windows and draft-damper, and the manner of attaching it to the front of the stove. It consists of an oblong metal box of the length required for the front of the stove, and of such width and depth as may be desired. It is closed at the ends and top, the bottom is open, and the front is recessed, forming a warming-chamber, D, the chamber being, generally, located directly over the hearth and ash-pit. The top is, in form, the segment of a dome, which is a reservoir for, and serves to reverberate, the heated air, which I regard as a highly important and essential improvement. In this dome or on the front are mica windows *e e e e*, which serve to lighten up and adorn the front. Near the bottom of the front of the air-chamber is the draft-damper or slide B, made in the usual way, except that in place of the metal pieces of the slide, which close the air-openings when the damper or slide is closed, I substitute mica *f f f f*, so that the fire may be seen and the light from it penetrate the room whether the damper be closed or open. This I regard as a highly essential and important improvement in dampers, as the front is more attractive, and as the condition of the fire may be known at a glance, which commends it to every housekeeper, and therefore facilitates the ready sale of the stove to which the chamber is attached. Below this damper is a recess, D, which is used as a warming-shelf. This chamber H is attached to the front of the stove C by hinges in the usual manner, so that it can be readily opened or closed, or entirely removed from the stove.

This chamber, as described, will materially diminish the amount of fuel required for a given degree of heat, because the heated air, passing from the chamber into the fire-box, insures a more perfect combustion of the fuel, and a more thorough consumption of the gases.

I do not claim an air-chamber, nor a reservoir for heated air alone; but

What I do claim is—

The combination, in an auxiliary chamber, for heating the air prior to its passage to the fuel-chamber of the reverberatory dome H, recessed warming-chamber D, and draft-damper B, arranged between the warming-chamber and reverberatory dome, substantially as and for the purpose described.

In witness whereof I have hereto set my hand this 23d day of November, 1874.

ELIZABETH HAWKS.

Witnesses:

ALONZO ALDEN,

J. E. SCHOONMAKER.