E. SPAULDING.

Furnace Stove and Register.

No. 87,519. Patented March 2, 1869.

Fig. 1.

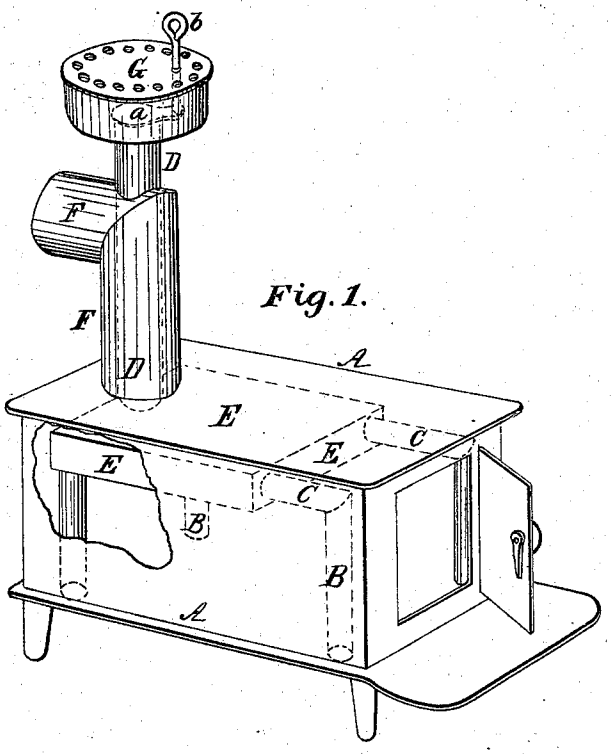
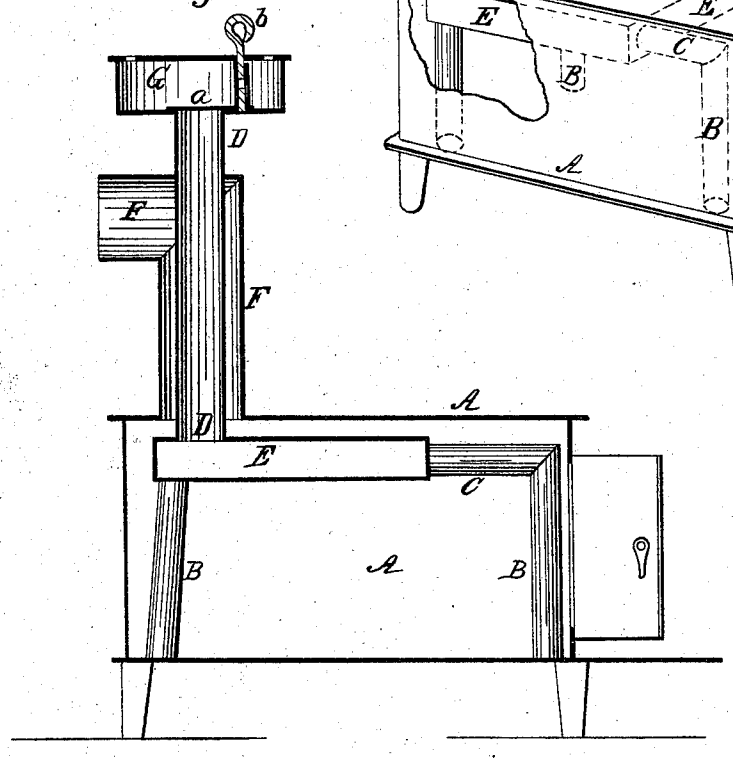


Fig. 2.



Witnesses:

C. C. Wilson

Edmund Mason

Inventor:

Earl Spaulding.

By atty A. B. Stoughton

N. PETERS, Photo-Lithographer, Washington, D. C.

United States Patent Office.

EARL SPAULDING, OF IONIA, MICHIGAN.

Letters Patent No. 87,519, *dated March* 2, 1869.

IMPROVEMENT IN FURNACE-STOVES AND REGISTERS.

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, EARL SPAULDING, of Ionia, in the county of Ionia, and State of Michigan, have invented certain new and useful Improvements in Furnace-Stoves and Registers, which I denominate "Spaulding's Improved Furnace-Stove and Register;" and I do hereby declare the following to be 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 represents a perspective view of the stove and its appliances complete.

Figure 2 represents a vertical section through the same.

Similar letters of reference, where they occur in the separate figures, denote like parts of the stove in both of the drawings.

My invention relates to a portable furnace-stove or heating-apparatus, simple and cheap in its construction, and adapted to purposes and places where cumbersome and expensive furnace-structures cannot be used.

This stove is designed to heat, in addition to the room in which it stands, an adjacent one, or one or more on an upper floor or story.

It is not in any way obstructed by the pipes or chambers in which the air that is to be heated is contained, or through which it passes, as they are arranged within the box or fire-chamber of the stove, and not visible on or from its exterior.

The heated air is also kept hot, in its transmission from the hot-air chamber or pipes to the upper room, by passing the conducting-pipe up through the gas and smoke-pipe, and from thence it is distributed through the room to be warmed, by a register of peculiar construction as will be explained.

To enable those skilled in the art to make and use my invention, I will proceed to describe the same with reference, to the drawings.

A represents an ordinary box wood-stove, though of course other-shaped stoves may be used just as well for the air-heating, and any other fuel than wood may be used.

In the corners of this stove, to be out of the way of supplying the stove with wood or other fuel, and within the fire-chamber, I arrange pipes B, which open below to admit atmospheric air, and this air, if preferred, may be brought from out of doors, or taken from the apartment in which the stove stands.

Along the upper corners of the stove, and within the fire-chamber, are horizontal, or nearly so, pipes C, which connect with the vertical pipes B, and these pipes C may continue to the hot-air flue, or pipe D, through which it is conducted to an upper or to an adjacent room, or said pipes may terminate in a hot-air chamber, E, underneath and near the rear of the top plate of the stove.

The pipe D, for conveying off the heated air, I pass through the smoke and gas-pipe F, so that it loses none or very little of its heat in the course of transmission to the apartment to be warmed by it.

After the conveying-pipe D passes out of the smoke and gas-pipe F, it is furnished with a drum-shaped head, G, in which there is a register, *a*, that is turned by a lever, or key, *b*, that projects through the drum, so as to be readily operated, and the top of the drum G is perforated, so that the hot-air, instead of coming into the room in volume, is broken up into jets and dispersed over the apartment

The operation of this air-heater will be readily understood.

The air enters through the bottom of the pipes B, thence, through C or E, to the hot-air pipe D, and to the apartment to be heated.

During the entire transmission of the air through the heater, it is in contact with, or enclosed by metal that is in direct contact with the fire, flame, or heated products of combustion, and hence becomes highly heated, and with a very small allowance of fuel.

Having thus fully described my invention,

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

The arranging, within the furnace or fire-box of a stove, the air-heating pipes or passages B C E, in combination with the passing of the conducting-pipe, which conveys the hot-air, through the smoke-pipe or passage, substantially as and for the purpose described.

Also, in combination with the hot-air passages and pipe D, the head G and its register and disseminator, as and for the purpose described.

EARL SPAULDING.

Witnesses:

C. O. THOMPSON,

M. B. THOMPSON.