

Heating Stove.

Patented March 29, 1859.



Fig. 1

Witnesses
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STOVE.

Specification of Letters Patent No. 23,363, dated March 29, 1859.

To all whom it may concern:

Be it known that I, F. GILLILAND, of Port Jackson, in the county of Montgomery and State of New York, 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 annexed drawings, making a part of this specification, in which—

Figure 1, is a vertical central section of a cylinder stove constructed according to my invention. Fig. 2, is a horizontal section of ditto, taken in the line *x, x*, Fig. 1.

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

This invention relates to an improvement in stoves which have sheet iron cases or bodies, and consists in a novel way of lining the same and controlling the draft, as hereinafter fully shown and described, whereby the sheet iron casing or body will be perfectly protected from the fire and the latter at the same time allowed to diffuse its heat without being materially absorbed or obstructed by the lining.

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

A, represents a cast iron base, and B, a sheet metal cylinder placed thereon.

C, is the grate placed in the bottom of the cylinder, D, is the fire chamber, and E, the lining of the same, said lining extending down to the fire grate.

The lining E, is formed of a series of inverted conical basins *a*, placed one over the other, each basin being provided with lugs or projections *a*, at its outer side which rest on the top of the one immediately below it, the top basin having the upper ends of vertical rods *b*, bent over it, said rods keeping the whole series of basins in proper position. The basins it will be seen by referring to Fig. 1, are open both at top and bottom, and the lugs or projections *a*, allow spaces *c*, between the basins, the upper edges of the basins being in contact with the cylinder B.

F is a cast iron cylinder which is fitted within the sheet iron cylinder B, directly over the fire chamber. The cylinder F, has a perforated flanch *d*, around its upper part, said flanch extending over the upper edge of the sheet metal cylinder B. The cylinder F, is considerably smaller than the cylinder B, so as to leave a space *e*, between

them; and over the flanch *d*, within the stove a sliding perforated ring or plate *f* is placed, the plate *f*, forming with flanch *d*, a register directly over the space *e*.

The top *e'*, of the cylinder F, is of conical form provided with openings *g*, *g*, and encompassed by a conical band *h*, which forms a register for the upper part of cylinder F.

G, is a cast iron cap which covers the cylinders F, and B, and is provided with a door *i*. The smoke pipe H, is attached to the upper end of the cap G, and the cap G, is sufficiently large to allow a space *j*, between it and the band *h*, of the top cylinder F.

The operation is as follows: When a fire is kindled in the chamber D, the register or slide *f* is closed and the register or band *h*, opened. A direct draft is thereby attained and the basins *a*, keep of course the fire from the sheet iron case B, while the spaces *c*, between them allow the heat to come in direct contact with the cylinder B. When the fire is sufficiently under way the openings *g*, may be wholly or partially closed and the slide *f*, so adjusted as to cause the perforations in the plate *f*, and flanch *d*, to register with each other. The products of combustion will then pass up the space *e*, and *j*, and into the pipe H, and the draft being rather more circuitous combustion will be checked to a certain extent and the heat will not be sufficient to injure the case B. The direction of the draft may be regulated as desired or as the nature of the case may require by adjusting the slide *f*, and the band *h*.

From the above description it will be seen that the fire will diffuse its heat instantaneously, nearly as soon as if no lining were employed and still the case will be perfectly protected. The lining E, may be of cast metal or fire brick, cast or molded in the form as described.

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

In combination with the lining E, and sheet metal case B, the cylinder F, placed within the body of the stove and provided at its top with the register or sliding band *h*, and a register or slide *f*, on its flanch *d*, for the purpose set forth.

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Witnesses:

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