

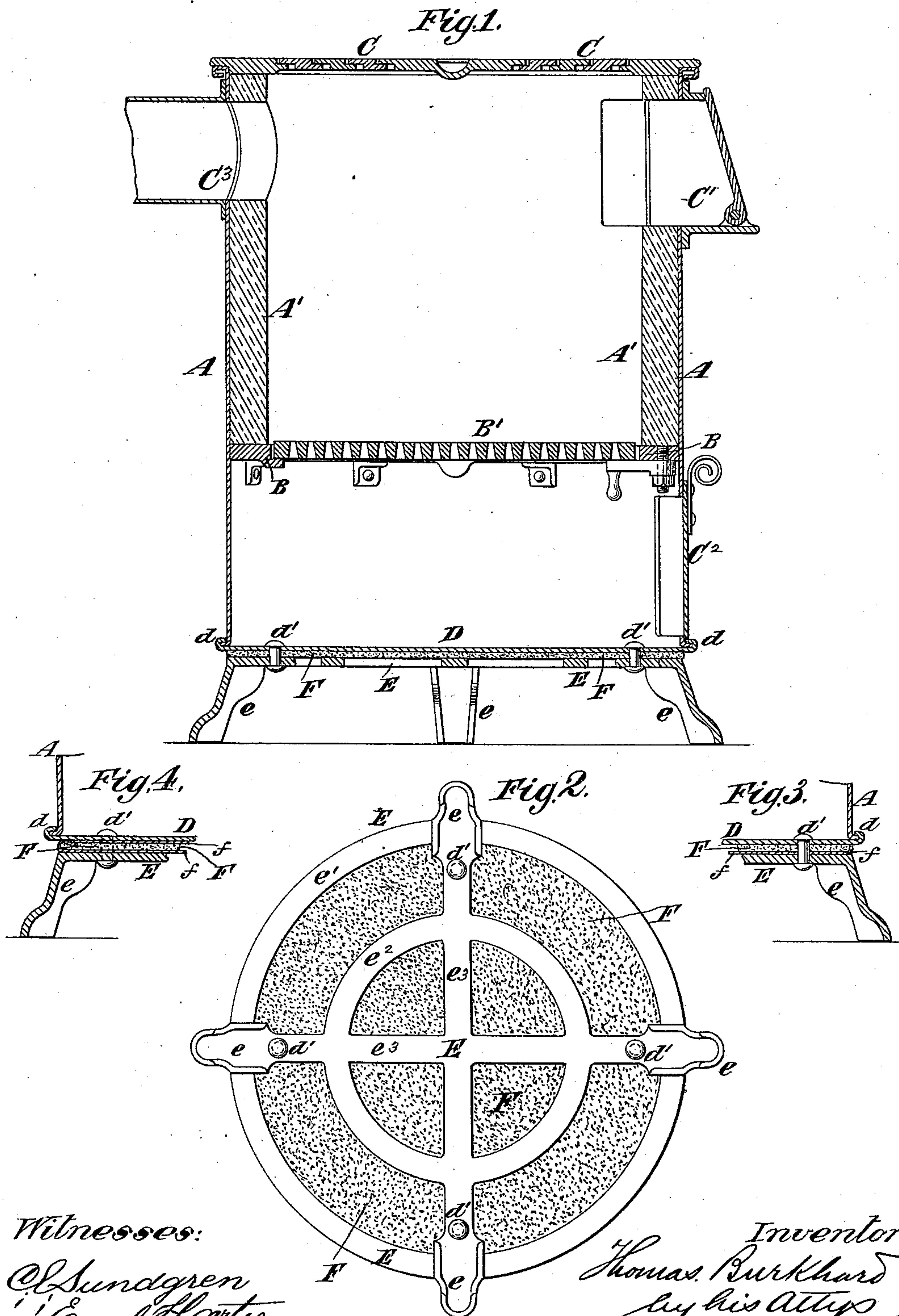
(No Model.)

T. BURKHARD.

STOVE.

No. 359,314.

Patented Mar. 15, 1887.



UNITED STATES PATENT OFFICE.

THOMAS BURKHARD, OF BROOKLYN, NEW YORK.

STOVE.

SPECIFICATION forming part of Letters Patent No. 359,314, dated March 15, 1887.

Application filed November 5, 1886. Serial No. 218,038. (No model.)

To all whom it may concern:

Be it known that I, THOMAS BURKHARD, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Stoves, of which the following is a specification.

My invention relates to stoves of the kind shown and described in my Letters Patent No. 310,647, dated January 13, 1885, and in which a cast-metal skeleton base is secured on the under side of the sheet-metal bottom of the stove.

The object of my present invention is to prevent radiation of heat downward through the openings in the cast-metal skeleton base, and consequent liability of fire when the sheet-metal bottom becomes red-hot by dumping hot coals upon it.

The invention will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical section of a stove embodying my invention. Fig. 2 is an inverted plan of the stove. Fig. 3 is a vertical section of a portion of the bottom, showing the shield or plate of sheet metal as placed between the asbestos or other non-conducting material and the skeleton cast-metal base; and Fig. 4 is a section similar to Fig. 3, showing the layer of non-conducting material as faced on both sides with sheet metal and secured between the sheet-metal stove-bottom and the base.

Similar letters of reference designate corresponding parts in all the figures.

A designates the side wall of the stove-body, which is usually of sheet metal, and above the ring B, which supports the grate B', is lined with fire-brick A'. The top of the stove C may be formed of a number of concentric rings, so as to afford an opening for a large or small kettle. The stove is represented as having a fire-door, C', for the introduction of fuel, an ash-pit door, C'', and an escape-pipe, C''', for the products of combustion, and the bottom of the stove D is of sheet-iron or other sheet metal, which may be secured to the cylindric body A by a folded joint or seam, as shown at d, or in any other suitable way.

In so far as described the stove is of ordinary construction, and does not embody my invention.

In the present example of the invention the

stove has secured to its sheet-metal bottom D a cast-metal skeleton base, E, which may be provided with feet or legs e, on which the stove is supported, and which may be secured to the sheet-metal bottom D by rivets d', or other suitable securing devices. In order to secure lightness, the cast-metal base E is of skeleton construction, and, as here shown, comprises concentric rings e' e'' and cross-bars e'''. 55

F designates a sheet or layer of asbestos or other suitable non-conducting material, which is applied and secured to the under side of the sheet-metal bottom D, and when the stove comprises a cast-metal base, E, as described, this layer F of non-conducting material will be interposed between the base and the sheet-metal bottom D, and will be secured in place by the same rivets or other devices which connect the sheet-metal bottom and the cast-metal base. This layer F of non-conducting material may be of any suitable thickness to prevent downward radiation from the bottom D sufficient to burn the floor, even though the floor may be unprotected and the bottom heated to a red heat. 65 70 75

In carrying out my invention it is desirable to cover the non-conducting material upon the under side, in order to prevent abrasion and disintegration thereof. I have, therefore, in Fig. 3 shown the non-conducting material as having upon the under side a facing, f, which consists of a thin plate of sheet metal constituting a shield or guard to protect the non-conducting material. When this shield or guard f is employed as a facing for the non-conducting material F, the non-conducting material will not be exposed to view upon the under side of the stove, as is the case with the construction shown in Figs. 1 and 2. 80 85 90

In Fig. 4 I have represented the layer of non-conducting material, F, as having a facing of metal, f, upon both sides thereof, and the layer F, having the metal facings f upon both its upper and lower sides, is interposed between the sheet-metal bottom D and the cast-metal skeleton base E. 95

My invention adds but very little to the cost of confectioners' stoves, and is of great advantage, because it will do much toward lessening the number of fires which occur in establishments where these stoves are used. 100

I am aware that it is not new to make the

walls and bottoms of stoves and ovens of two thicknesses of sheet metal, each continuous and imperforate, and having between them a non-conducting filling, and I do not claim, broadly, such construction as of my invention. In my construction the cast-metal base must be of considerable thickness to give it necessary strength, and it is made of open or skeleton form to reduce its weight. If the sheet-metal bottom were exposed on the underside through the openings in the skeleton base and in close proximity to the floor, the floor might be ignited when hot coals are dumped upon the sheet-metal bottom. Even if the base were imperforate, it might get red hot if a body of heated coals were dumped upon the bottom.

By the employment of non-conducting material F between the sheet-metal bottom and skeleton base I secure advantages which have never been possessed by the stoves heretofore in use. I am able to use a cast-metal base of open or skeleton form, which is desirable because of its lightness, and without having the sheet-metal bottom, which may become red-hot, exposed on the under side through the openings in the base, and by the use of the shield f, I protect the asbestos or other non-conducting material from exposure and disin-

tegration without the disadvantage of making the cast-metal base continuous or imperforate to secure such result.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, in a stove-body, of a sheet-metal bottom, D, a cast-metal skeleton base, E, secured to the underside of said bottom, and serving to prevent its bulging and cracking by expansion and contraction, and a layer of non-conducting material, F, interposed and retained in place between the sheet-metal bottom and the cast-metal base, substantially as herein described.

2. The combination, in a stove-body, of the sheet-metal bottom D, a cast-metal skeleton base, E, secured to the under side of the bottom, and serving to prevent its bulging and cracking by expansion and contraction, and a layer of non-conducting material, F, faced upon the under side with a sheet-metal shield, f, interposed and secured between the sheet-metal bottom and the cast-metal skeleton base, substantially as herein described.

THOMAS BURKHARD.

Witnesses:

FREDK. HAYNES,

EMIL HERTER.