

(No Model.)

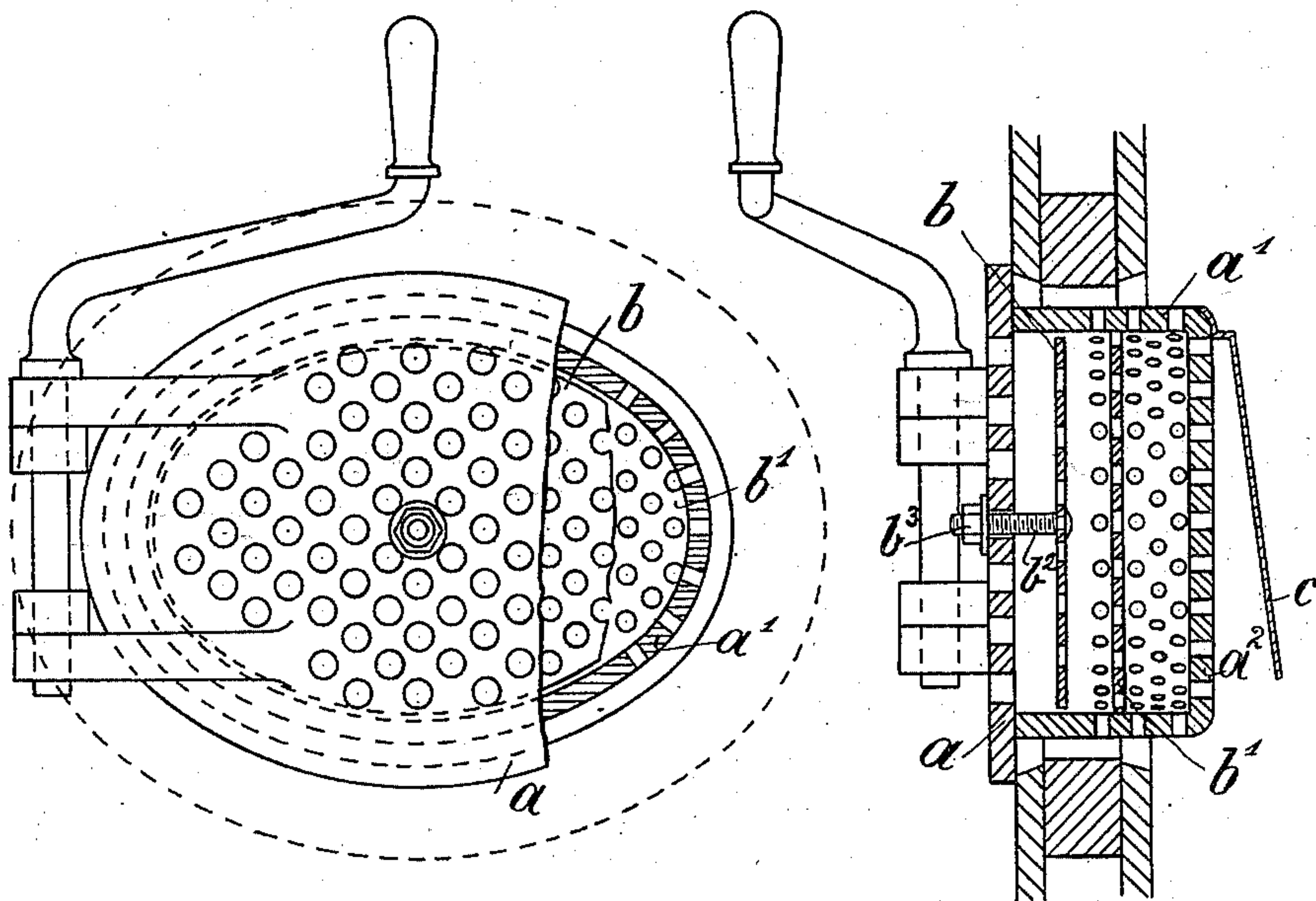
A. BURKHART-STALDER.
FURNACE DOOR.

No. 561,536.

Patented June 2, 1896.

Fig. 1.

Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

AUGUST BURKART-STALDER, OF BERN, SWITZERLAND.

FURNACE-DOOR.

SPECIFICATION forming part of Letters Patent No. 561,536, dated June 2, 1896.

Application filed March 18, 1896. Serial No. 583,837. (No model.) Patented in Switzerland March 22, 1895, No. 9,949.

To all whom it may concern:

Be it known that I, AUGUST BURKART-STALDER, a citizen of the Swiss Republic, residing at Bern, Switzerland, have invented certain new and useful Improvements in Doors for Fireplaces, (for which I have obtained Letters Patent in Switzerland, No. 9,949, dated March 22, 1895;) and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is a door for furnaces and all kinds of fireplaces, permitting air to pass through the same and become heated, and thus to be admitted to the fuel at a high temperature, so that the formation of smoke may be prevented.

In the accompanying drawings the door is shown by Figure 1 in elevation and by Fig. 2 in a vertical cross-section.

The door is composed of plates, which are united in such a manner as to form an inner hollow space inclosed by a front wall a , a rear wall a^2 , and the side a' , which may be square, elliptical, or of any other shape. These walls are perforated, as shown, so that the air entering through the holes in the wall a in passing on toward the fireplace is compelled to traverse the said inner space of the door and to escape through the perforations of the sides a' and rear wall a^2 . The side and rear wall, especially the latter is so heated by radiation from the incandescent mass on the grates that the air while passing through the door is sufficiently elevated in temperature to prevent the formation of smoke from the grate.

In order to produce a better circulation of air in the hollow space of the door, and thereby to increase the temperature of the air, I have provided in the inner space two more plates b and b' , one, b' , being preferably stationary and the other, b , being movable. To this end the latter has a screw c^2 riveted in its middle, which passes through a suitable central opening of the plate a , and which is provided with a nut b^3 outside. The perforations in the walls forming the inner space of the door are preferably widest in the outside plate a , and are made smaller and smaller toward the inside, the smallest being in the plate a^2 . The perforations in the movable plate b are so

placed that imperforate parts register with the openings of plate a , and that the perforations in the plates a and b are closed up reciprocally, when the nut b^3 is turned down and the plate b is drawn against the plate a . A plate c , being imperforate, is preferably secured with its top edge to the plate a^2 , as shown in the cross-section, Fig. 2, having the object to give to the air passing through the door a downward direction, so as to bring it in closer contact with the fuel and to be more effective in smoke consuming.

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

1. A door for fireplaces composed of perforated plates and sides in order to form a hollow space through which air is passing and provided with an inner perforated plate parallel to the front and rear plates dividing the said inner space into two compartments and provided with a movable plate b having means to approach it more or less to the front plate a , of the door and having perforations which register with the full part of the plate a , while the full parts of the plate b , are adapted to cover up the perforations of the plate a , substantially as described.

2. A door for fireplaces composed of perforated plates and sides in order to form a hollow space through which air is passing and provided with an inner perforated plate parallel to the front and rear plates dividing the said inner space into two compartments and provided with a movable plate b , having means to approach it more or less to the front plate a , of the door and having perforations which register with the full part of the plate a , while the full parts of the plate b , are adapted to cover up the perforations of the plate a , and provided with an imperforate plate c , attached to the door with its upper edge for the purpose of giving the air a downward direction substantially as described and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

AUGUST BURKART-STALDER.

Witnesses:

C. HANSLIN,

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