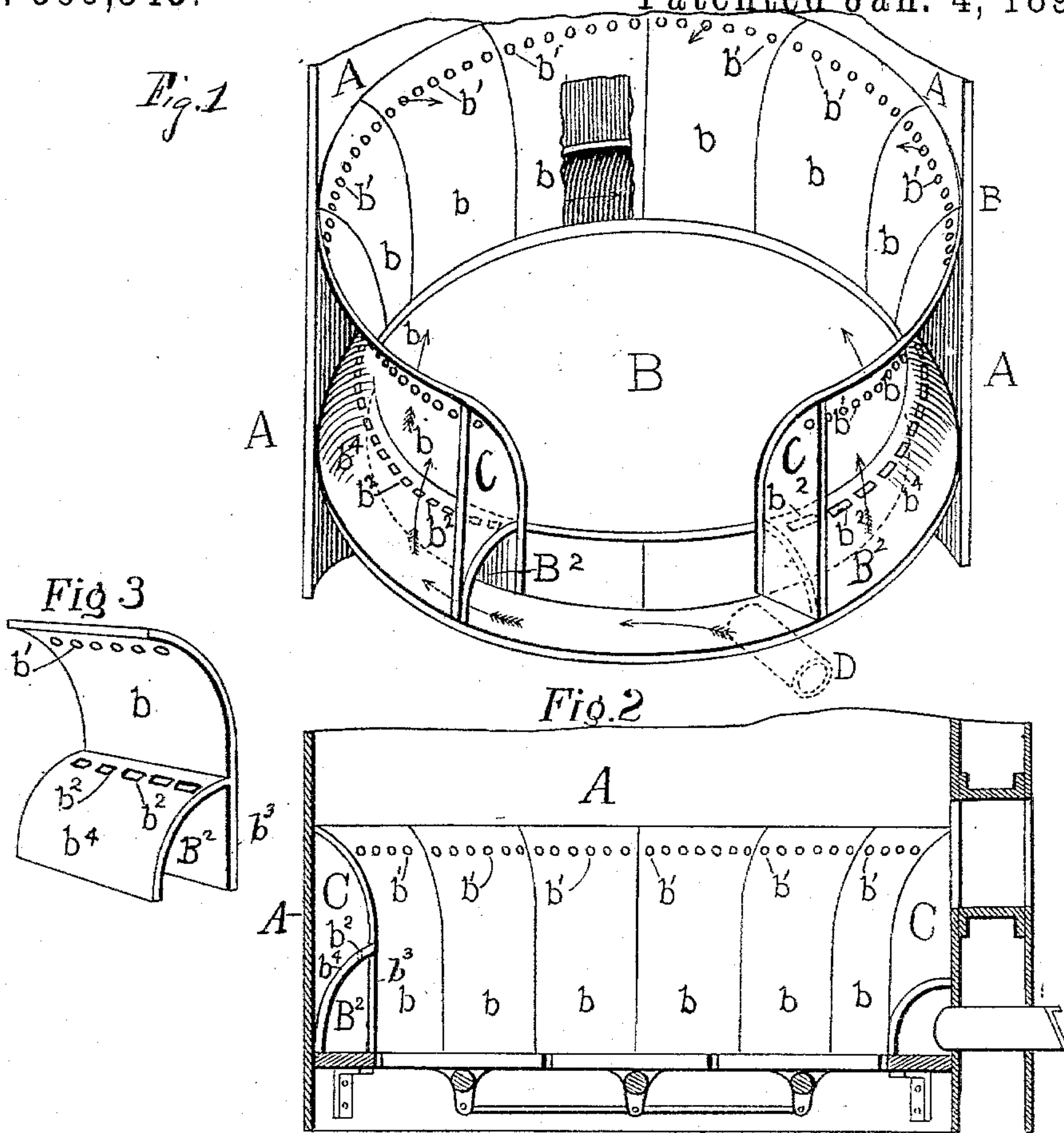


(No Model.)

W. T. BRADBERRY.
FIRE POT FOR STOVES, &c.

No. 596,843.

Patented Jan. 4, 1898.



WITNESSES:
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UNITED STATES PATENT OFFICE.

WILLIAM T. BRADBERRY, OF ALLEGHENY, PENNSYLVANIA.

FIRE-POT FOR STOVES, &c.

SPECIFICATION forming part of Letters Patent No. 596,843, dated January 4, 1898.

Application filed June 8, 1897. Serial No. 639,828. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. BRADBERRY, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Fire-Pots for Stoves, &c.; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to fire-pots for stoves and furnaces, and has for its object to provide a stove or furnace with an air-heating device in which the air will be equally distributed to the combustion-chamber in a simple and efficient manner. I accomplish this object by means of certain new and useful improvements in the construction of the fire-pots of stoves or furnaces, whereby the combustion-chamber of the same is made more durable and efficient, besides contributing to the more perfect combustion of the fuel, together with the greater part of the smoke, soot, &c., made therein.

In the accompanying drawings, Figure 1 is a perspective view showing the inside of a hot-air stove or furnace. Fig. 2 is a vertical sectional view of the same, and Fig. 3 is a perspective view of one of the lining-sections of the stove.

In the drawings, A represents the outer wall of the stove.

B is the combustion-chamber.

b b are sections of the inner wall of the stove or furnace. b' b' are perforations in these sections b , through which perforations air is admitted to the combustion-chamber from the annular air-chamber C. This latter chamber C is formed by the shape of these lining-sections b , as seen in Fig. 3, where the upper part of the casting is bent backward, as shown, in connection with the vertical wall A of the stove.

B^2 is also an annular air-chamber, into which air is admitted through the pipe D or by some other appropriate device or way.

The partition or division between the up-

per and lower chambers is formed by a rear or outwardly-extending portion b^4 . The part b^4 is preferably curved downward, so as to rest on the bottom of the stove, and has its upper portion adjacent to the inner wall of the section provided with openings b^2 .

Air is admitted to the chamber B^2 , as stated, and as it enters it begins to be subjected to the heat of the stove, and it then passes up and out of the chamber through perforations b^2 b^2 and into the other chamber C. In order to get the air evenly distributed throughout the entire chamber B^2 from the entrance to the farther end, the openings b^2 gradually increase in size from the entrance to the chamber to the exit. In this way I find the air is made to enter the upper chamber C equally all around. The larger openings b^2 by reason of their increased size will permit the air to pass through them more freely, thus aiding in the flow of the air all around. In this chamber C the air becomes heated, and in this condition it is admitted to the chamber B for combustion purposes.

The door of the stove may have any suitable device to close the ends of the chambers B^2 and C.

As the lining-sections b of the stove are subject to the heat from the burning fuel within and above the fire-grate, it will be readily understood that the back of the same (said sections b) will be in constant contact with the air, and hence not only will this air be heated by radiation from these sections b , but the air on the back thereof will save them from burning out, thus prolonging the life of the same. This I accomplish by the form of said lining-sections b , made so as to create, in combination with the wall and bottom of the stove, the two annular chambers B^2 and C, wherein the air is admitted, quickly heated, and at once distributed where it will be useful in combustion. The lining-sections b , when properly formed, will have the integral parts b^3 and b^4 and of the shape as seen in Fig. 3, and these sections, when placed within the stove or furnace, will form the two annular chambers B^2 and C in connection with the outer wall of the furnace or stove.

I am aware that hot air has been used in stoves or furnaces to aid in combustion, and

I therefore do not claim this function broadly, but merely by the means as hereinbefore described and shown.

While I show the lining of my stove to be made in sections, I desire to say that this lining may and can be molded in one piece.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

10 1. A new article of manufacture, a lining for stoves comprising an inner wall, the upper portion of which extends outwardly and is provided with holes or perforations, and a portion *b*⁴ extending outwardly and downwardly from the intermediate portion of said inner wall with its bottom substantially even with the bottom of the inner wall, the portion *b*⁴ adjacent to the inner wall being provided with a series of variant-sized openings, substantially as set forth.

2. In a stove, the combination, with a shell, of a lining therein, said lining comprising an inner wall and a downwardly-inclined projection extending from the intermediate portion thereof to the bottom of the stove and thereby forming an upper and a lower annular chamber, the upper portion of the inner wall projecting outward to the shell and being provided with perforations, and the upper portion of the inclined projection being provided with a series of variant-sized openings, and an air-inlet communicating with the lower one of said chambers, substantially as set forth.

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

WILLIAM T. BRADBERRY.

Witnesses:

GEO. M. BARR,
E. P. WILSON.