April 10, 1951 F. CHRISTENSON 2,548,421

ATTACHMENT FOR CERAMIC COMBUSTION CHAMBERS

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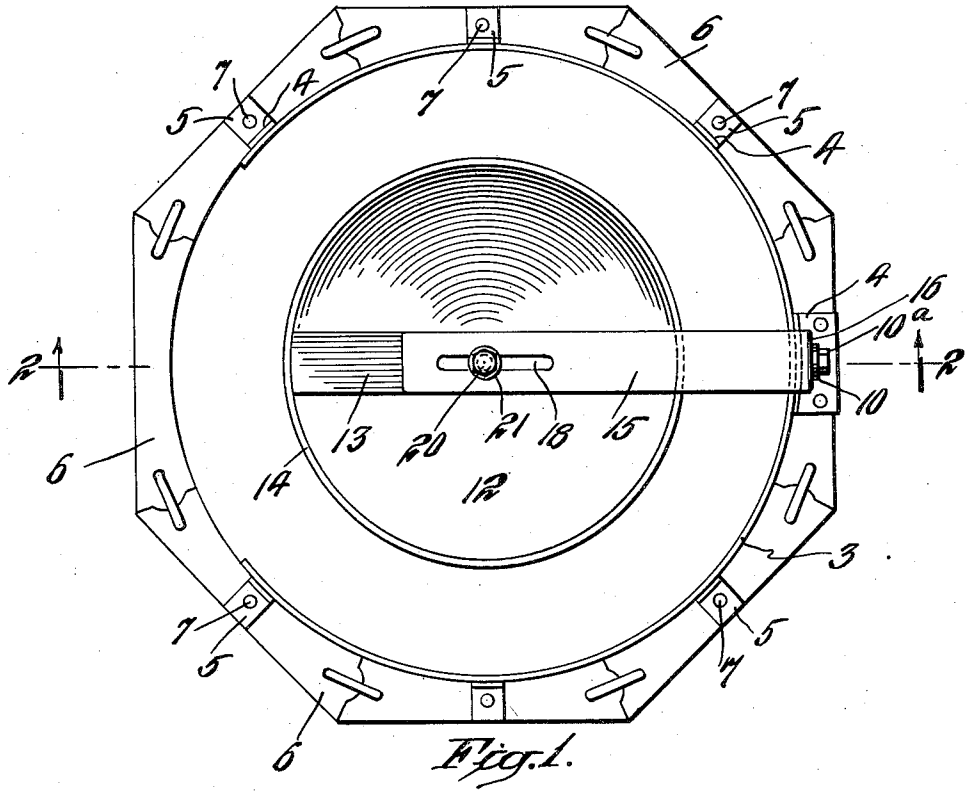
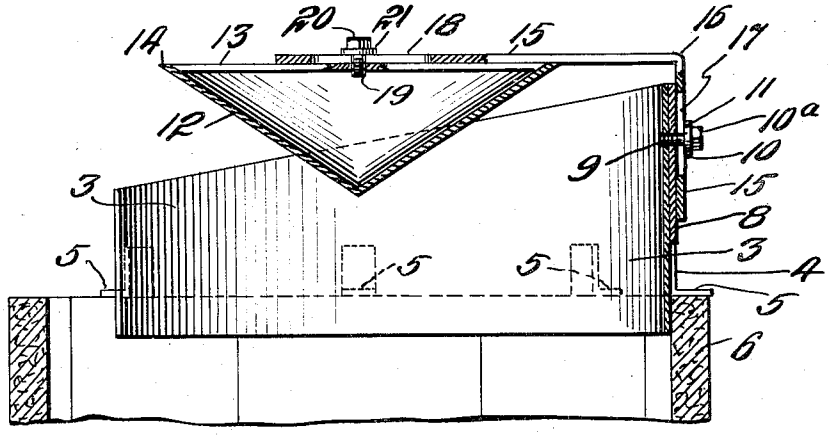


Fig. 1.

Fig. 2.



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ATTACHMENT FOR CERAMIC COMBUSTION CHAMBERS

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1 Claim. (Cl. 110—97)

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My invention comprises a new and improved form of attachment to be used in connection with ceramic combustion chambers.

An object of the invention is to increase the height of the wall of such a chamber, such for instance as shown in my prior Patent 2,370,008 dated February 20, 1945, or of the type shown in the patent to McDonald et al. #2,012,171.

Conditions frequently arise in the use of ceramic combustion chambers which require a deeper or higher wall surface. Heretofore when such conditions arose and it was necessary to increase the height of the wall, it has been necessary to either build an entirely new combustion chamber or to increase the height of the present one by building an addition thereto and set it on top of the oven which has been installed and is in use. Such a procedure is objectionable and expensive for the reason that it involves building an addition to the chamber in use, but also such addition being made of ceramic material, is heavy and awkward to transport and install.

The principal object of the present invention is to provide an extension or addition to the walls of a combustion chamber by means of a metal attachment or addition thereto which may be very economically made and readily transported and attached to any combustion chamber, whether the chamber be circular, octagonal or rectangular in shape.

In many and in fact most instances, it is desirable to have a baffle plate at the top of the chamber in order to conserve and control the volume of heat.

A further object of the invention is to provide a baffle plate constructed in such a way that it may be used in conjunction with the means for increasing the height of the oven heretofore mentioned, or it may be used independently thereof.

In order to accomplish the results heretofore mentioned, my invention consists of a device constructed of sheet metal of any desired height to enable it to be placed on the top of a combustion chamber and secured thereto by flanges. The baffle plate may be secured to said extension and made adjustable.

Although the novel features which are believed to be characteristic of this invention will be more particularly pointed out in the claims appended hereto, the invention itself may be better understood by referring to the following description in which a specific example thereof has been set forth for purposes of illustration.

In the accompanying drawing:

Fig. 1 is a top plan view of an oven with the attachment resting thereon.

Fig. 2 is a sectional view of the device taken on the line 2—2 of Fig. 1.

The device consists of a member 3 formed of preferably thin but heat resisting metal or alloy.

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Riveted or otherwise secured to the member 3 are preferably rectangular metal straps 4 which may be on the inside or outside of the member 3 and are bent at right angles to form extensions 5. These extensions 5 rest upon the top of the wall 6 of a combustion chamber so that the metal member or extension 3 fits closely against the sides of the combustion chamber and rests thereon and is prevented from sliding down on the side of the chamber by the extensions 5. These extensions may if desired be long enough to extend over the top of the combustion chamber and bent at right angles to grasp the wall 6 of the combustion chamber. Holes 7 are formed in the extensions 5 so that, if desired, the device may be screwed or bolted to the top of the wall 6 of the combustion chamber. It will be understood that the device may be placed on the inside or outside of the top of a combustion chamber.

Secured to the rear of the device 3 is a plate 8. This plate 8 contains a hole 9 through which projects a bolt 10 having a nut 10*a* and a washer 11. In Fig. 2 is shown a baffle plate 12 of substantially cone shape. At one side of the top of the baffle plate is secured a strip of metal 13 one end of which is welded, riveted or otherwise secured at 14 to the edge of the baffle plate. A strip of metal 15 at one end thereof overlaps the member 13 and the other end of the member 15 is bent at substantially right angles 16 so that the bent over end abuts against the plate or member 8 secured to the wall of the member 3. In the member 15 is formed a slot 17 through which the bolt 10 extends and the height of the baffle plate may be raised within the limits of the slot 17 by moving the member 15 up or down and securing it in position by tightening the nut 10*a*. The member 15 overlaps the member 13 and extends beyond the center of the baffle plate. The member 15 also contains a slot 18 through which extends a bolt 19 having a nut 20 and a washer 21 so that the baffle 12 may be adjustably secured by means of the bolt 19 and nut 20.

While the extension device is shown circular in form in the drawing, it will be understood that the device, being made of sheet metal, can easily be preformed so as to fit a chamber of any desired shape.

Certain specific terms have been used herein for convenience in referred to the various details of the invention. It is to be understood, however, that these terms are to be given as broad an interpretation as the state of the art will permit, although a specific embodiment of the invention has been set forth for purposes of illustration, various changes and modifications may be made therein as will be apparent to a person skilled in the art, the invention is only to be limited in accordance with the scope of the following claim.

I claim:

The combination of a ceramic combustion chamber and a concentric metallic attachment for increasing the height of the chamber, said attachment being preformed to be substantially of the same contour as the chamber and to constitute a vertical extension thereof, lateral flanges on the lower portion of the attachment whereby the same may be positioned on the upper rim of the chamber so as to constitute a continuation thereof, a vertical arm adjustably mounted on the side of the attachment, said arm having a horizontal extension at the top thereof and a baffle plate adjustably secured to the end of said arm so as to be near the center of said attachment for baffling and deflecting gases emitted from said chamber.

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