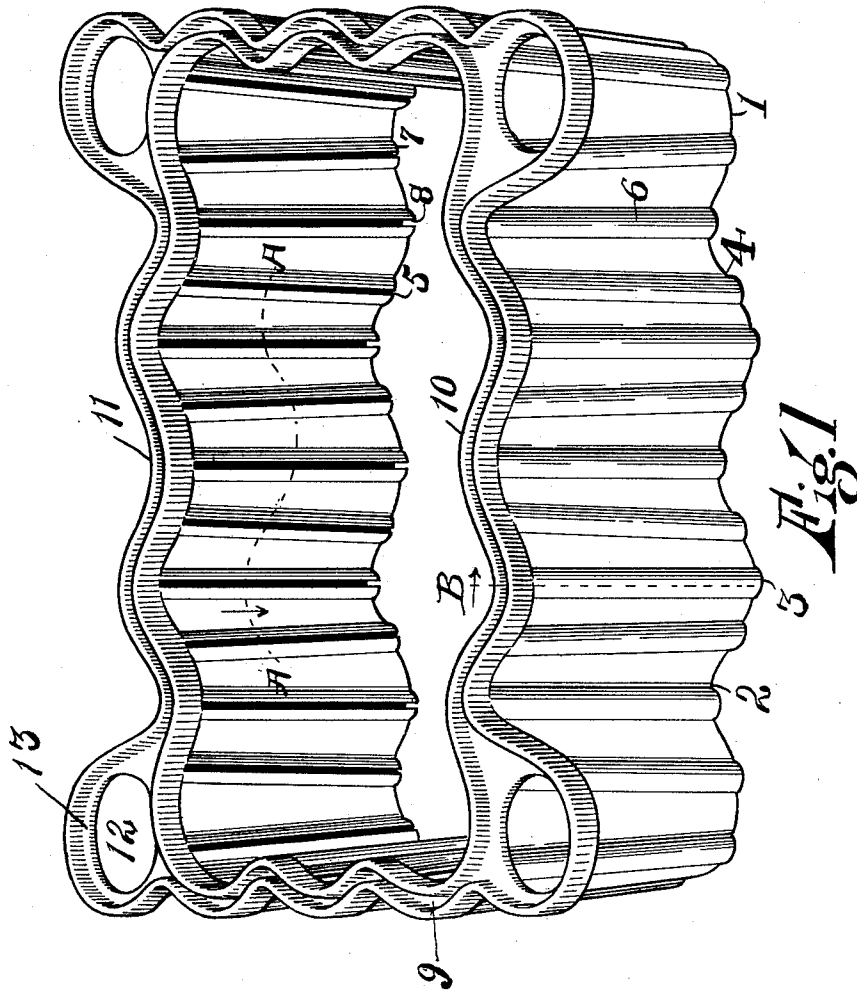


W. CLERKIN.
FIRE POT FOR STOVES AND FURNACES.
APPLICATION FILED OCT. 24, 1910.

1,006,466.

Patented Oct. 24, 1911.

2 SHEETS-SHEET 1.



Witnesses:

Austin B. Hauscom
G. B. Humphrey

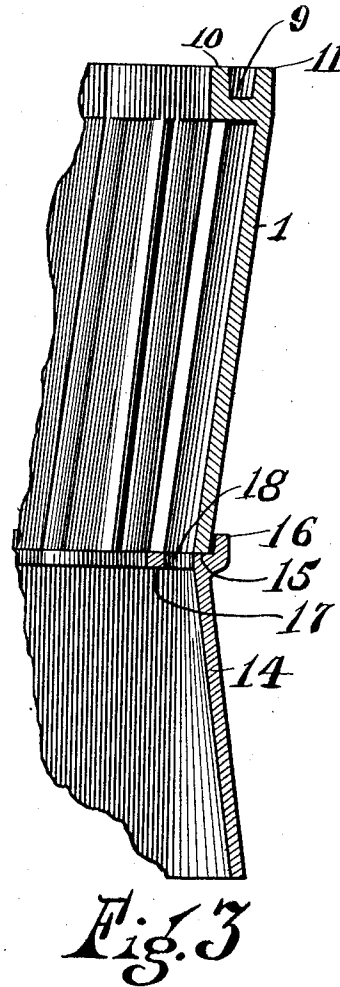
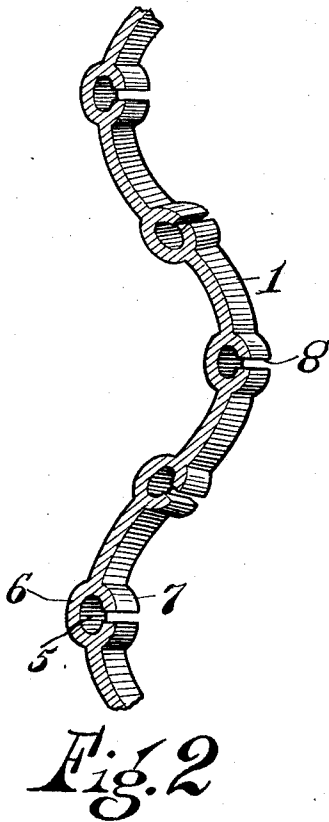
INVENTOR-
William Clerkin,

BY *C. E. Humphrey*
ATTORNEY.

W. CLERKIN.
FIRE POT FOR STOVES AND FURNACES.
APPLICATION FILED OCT. 24, 1910.

1,006,466.

Patented Oct. 24, 1911.
2 SHEETS—SHEET 2.



Witnesses:
Austin B. Nauscom,
G. B. Humphrey

INVENTOR—
William Clerkin,
By *G. B. Humphrey*
ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM CLERKIN, OF AKRON, OHIO, ASSIGNOR TO THE TAPLIN-RICE, CLERKIN
COMPANY, OF AKRON, OHIO, A CORPORATION OF OHIO.

FIRE-POT FOR STOVES AND FURNACES.

1,006,466.

Specification of Letters Patent.

Patented Oct. 24, 1911.

Application filed October 24, 1910. Serial No. 588,732.

To all whom it may concern:

Be it known that I, WILLIAM CLERKIN, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented new and useful Improvements in Fire-Pots for Stoves and Furnaces, of which the following is a specification.

This invention relates to improvements in fire-pots for stoves and heating furnaces, and its principal object is to provide a fire-pot preferably constructed as a unitary article, having the wall thereof sinuous to provide alternating convex and concave portions throughout the wall, with the concave portions terminating in said convex portions, whereby any expansion or contraction due to uneven heating and cooling will be taken care of or be absorbed by the wall itself, due to the resiliency or yieldability imparted to it by its sinuous shape, thereby eliminating to a great extent all danger of cracking and breaking.

A further object of the invention is to evenly distribute a supply of fresh air to the burning fuel contained in the fire-pot; and to accomplish this effectually the wall of the fire-pot is provided at selected intervals with a plurality of upwardly-extending air-cells cored or otherwise formed in said wall, with the wall surrounding each cell convex in contour and projecting beyond the normal inner and outer faces of the fire-pot wall. Said cells preferably terminate at points remote from the top of said fire-pot wall and are open at the bottom to establish communication with the interior of an ash-pit. Further, the inner wall of each cell is provided with an upwardly-extending slot to permit air passing upwardly from the ash-pit through the cells to escape in the body of the stove or furnace, thus distributing a fresh supply of air to the burning fuel.

Experience has shown that the best results are obtained by placing the air cells at the apices of the convex and concave portions and others at points where the convex portions terminate in the concave. This distribution of air-cells also serves to increase the elasticity or yieldability of the fire-pot wall by introducing in said wall a plurality of air cells, one of the walls of each of which is slotted to permit the walls bounding the slot to move toward or away from

each other under the strain of the undue expansion or contraction, whereby the strain of expansion or contraction is taken care of or absorbed by the wall itself, thus prolonging the life of the fire-pot and increasing its effectiveness.

With the foregoing and other objects in view, the invention consists in the novel construction, combination and arrangement of parts constituting the invention to be hereinafter specifically described and illustrated in the accompanying drawings which form a part hereof wherein is shown the preferred embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the claims hereunto appended.

In the drawings, in which similar reference numerals indicate like parts in the different figures: Figure 1 is a view in perspective of a fire-pot constructed in accordance with this invention. Fig. 2 is a horizontal, sectional view of a portion of the fire-pot wall on line A of Fig. 1; and, Fig. 3 is a vertical, sectional view of a portion of the fire-pot wall on line B of Fig. 1, together with a sectional view of a portion of an ash-pit used therewith.

Before giving a detailed description of the drawings, it may be stated that the fire-pot is usually, although not necessarily, constructed rectangular in form and is especially adapted for use in large heating devices.

Referring to the drawings in detail, the reference numeral 1 denotes the wall of the fire-pot generally, preferably having the outline of an inverted, hollow frustum of an elongated pyramid and sinuous in contour to provide inwardly-extending convex portions 2 and outwardly-projecting concave portions 3 throughout the wall, with the inwardly-extending convex portions 2 terminating at 4 in said outwardly-projecting concave portions 3. This wall is provided at selected intervals with tubular air-cells 5, formed therein open at their lower ends and extending upwardly from the lower portion of the wall 1 and terminating below the upper portion thereof. The air-cells 5 are surrounded by walls 6 and 7, convex in outline, causing the walls 6 to project or bulge beyond the normal outer face of the wall 1, and the walls 7 to correspondingly bulge

inwardly, whereby there is imparted to the lateral faces of the wall of the fire-pot in addition to its sinuosity, a plurality of upwardly extending ribs, giving the said wall a corrugated or ribbed appearance. I prefer to place these air-cells at the apices of the convex portions and the concave portions and at points where the convex portions terminate in the concave portions.

At the upper portion of the wall 1 are a pair of approximately parallel inner and outer upwardly-extending flanges 10 and 11 to provide between them a groove constituting a seat 9 to receive the lower portion of a radiator (not shown). The seat 9 and flanges 10 and 11 are formed sinuous throughout to correspond and register with the sinuosities of the wall 1. At selected portions of the body of the fire-pot the seat 9 is laterally extended and provided with openings 12 smaller than the seat, to leave ledges 13 on which corresponding portions of the radiator may seat. The outer flange 11 is outwardly-extended at these points and surrounds the ledges and forms tight-joints with corresponding portions of the radiator.

The fire-pot is commonly mounted on an ash-pit 14, a portion of which is shown in Fig. 3, wherein the upper portion is shown provided with a seat 15, for the fire-pot and surrounded by a marginal flange 16 to constitute a combined guiding and holding member. Extending inwardly from the seat 15 is a horizontal flange 17 provided with apertures 18, adapted to register with the open lower ends of the air-cells 5 to permit the air to pass upwardly from the ash-pit through the air-cells 5 and slots 8 to the burning fuel in the fire-pot.

I claim:

1. A stove or heating furnace embodying an ash-pit, and a fire-pot having the wall thereof sinuous in cross-section to provide alternating convex and concave portions throughout the wall, said convex portions terminating in said concave portions, each of said portions provided with an air-cell communicating with the interior of the fire-pot and further adapted to communicate with the ash-pit.

2. A stove or heating furnace embodying an ash-pit, and a fire-pot having the wall thereof sinuous in cross-section to provide alternating convex and concave portions throughout the wall, said convex portions terminating in said concave portions, said wall provided at the apices of the said convex and concave portions and at the junction where said convex portions meet said concave portions with upwardly-extending air-cells communicating with the interior of the fire-pot, and further adapted to communicate with the ash-pit.

3. A stove or heating furnace embodying an ash-pit, and a fire-pot having the wall thereof sinuous in cross-section to provide alternating convex and concave portions throughout the wall, said convex portions terminating in said concave portions, each of said portions provided with an air-cell communicating with the interior of the fire-pot and adapted to communicate with said ash-pit, and a seat for a radiator at the upper portion of the wall, sinuous in outline, corresponding to the sinuosity of the wall of said fire-pot, said seat provided with a marginal flange.

4. A stove or heating furnace embodying an ash-pit, and a fire-pot having the wall thereof sinuous in cross-section to provide alternating convex and concave portions throughout the wall, said convex portions terminating in said concave portions, each of said portions provided with pairs of ribs, one of the ribs of each pair projecting outwardly, constituting a convex portion on the outer face of the wall of said fire-pot, and the other projecting inwardly constituting a similar parallel portion on the inner face of said wall, said ribs providing air-cells in said wall, said air-cells adapted to communicate at one end with the ash-pit and the inwardly-extending ribs of each pair provided with slots establishing communication between the ash-pit and the interior of the fire-pot.

5. A stove or heating furnace embodying an ash-pit, and a fire-pot having the wall thereof sinuous in cross-section to provide alternating convex and concave portions throughout the wall, said convex portions terminating in said concave portions, each of said portions provided with pairs of ribs, one of the ribs of each pair projecting outwardly forming a convex portion on the outer face of said wall and the corresponding rib projecting inwardly to provide a similar parallel portion on the inner face of said wall, said ribs providing room for air-cells in said wall, said air-cells adapted to communicate at one end with the ash-pit and the inwardly-extending ribs of each pair provided with slots for establishing communication between the ash-pit and the interior of the fire-pot, said wall further provided in the upper portion thereof with a seat corresponding in contour to the sinuosity of the said fire-pot for the reception of a radiator.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM CLERKIN.

Witnesses:

A. E. KLINY,

C. E. HUMPHREY.