Sept. 10, 1929. F. W. CUFFE 1,728,108

OVEN CONSTRUCTION

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Fig. 1.

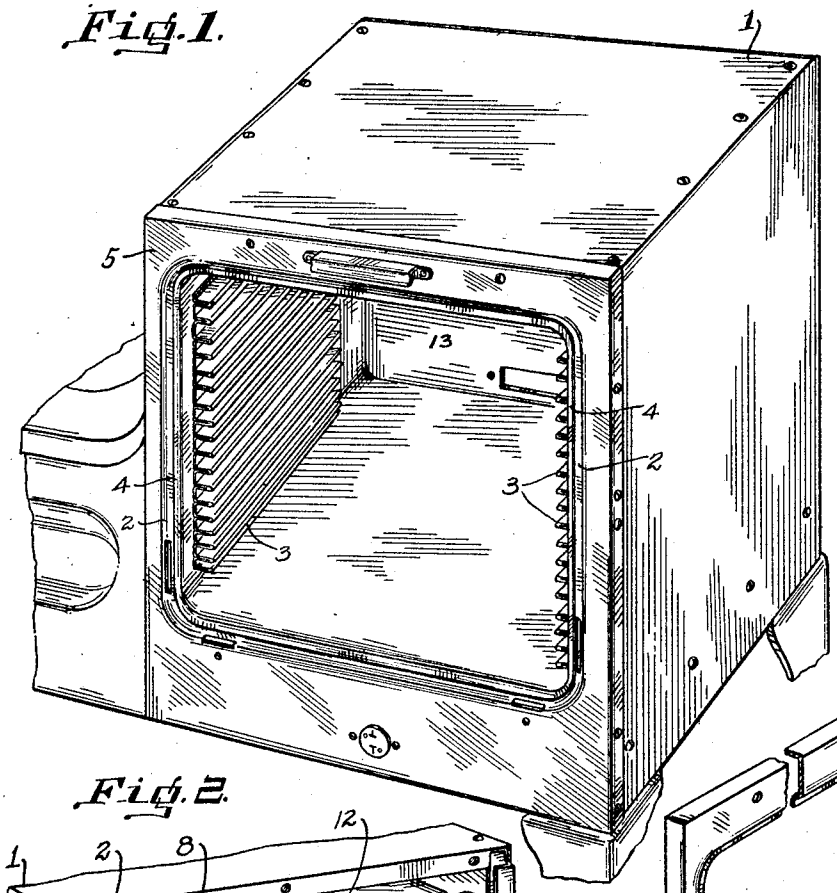



Fig. 3.

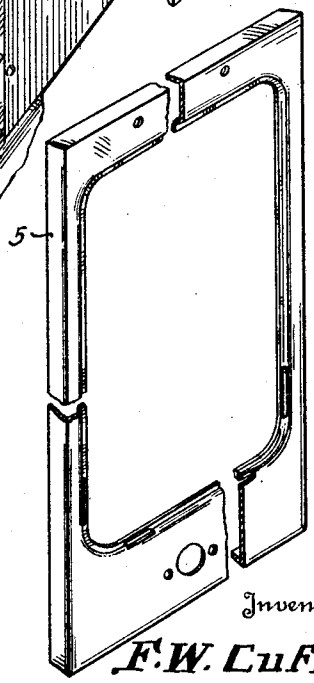
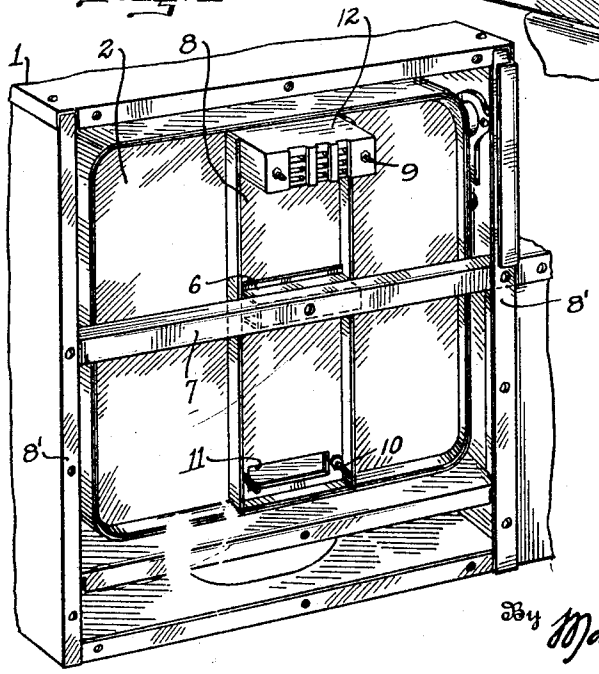



Fig. 2.




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Fig. 4.

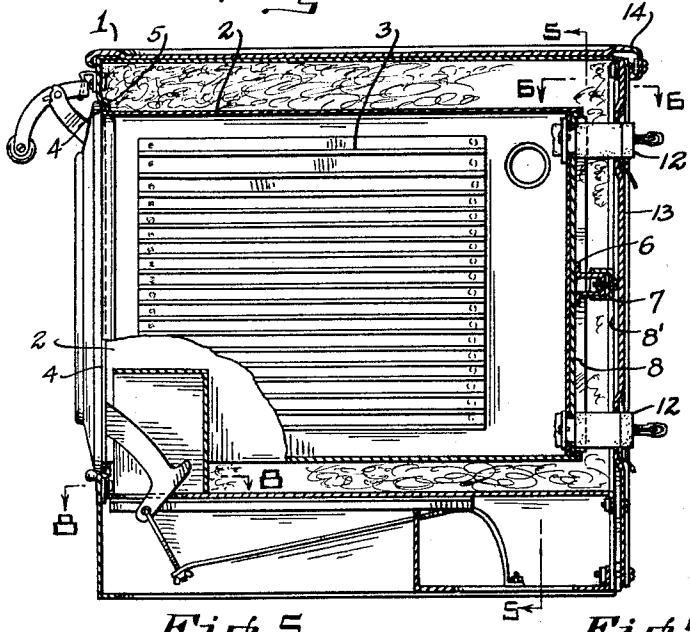



Fig. 8.

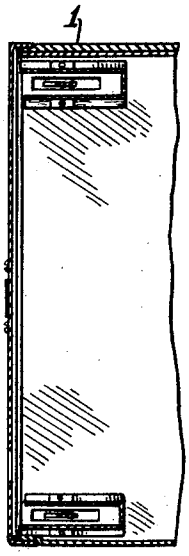



Fig. 5.

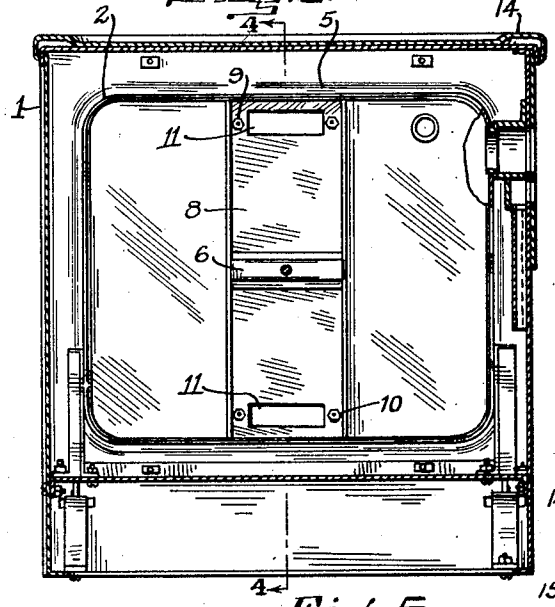



Fig. 9.

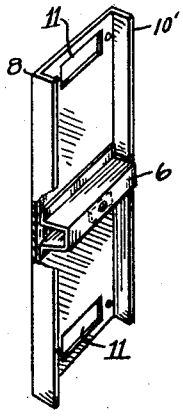



Fig. 10.

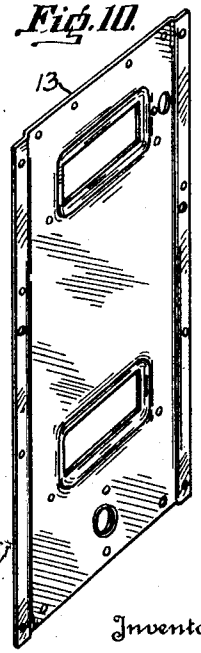



Fig. 7.

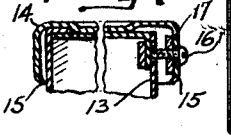
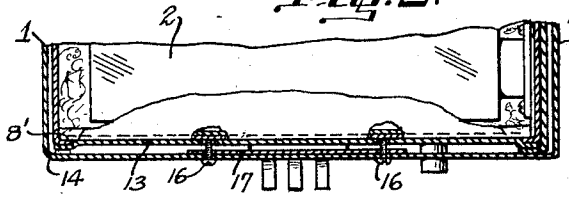



Fig. 6.




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Patented Sept. 10, 1929. 1,728,108

# UNITED STATES PATENT OFFICE.

FREDERICK WILLIAM CUFFE, OF WAYNESBORO, VIRGINIA, ASSIGNOR TO THE W. J. LOTH STOVE COMPANY, OF WAYNESBORO, VIRGINIA.

## OVEN CONSTRUCTION.

Application filed July 26, 1928. Serial No. 295,461.

This invention relates to an oven construction and more particularly to ovens to be used in connection with electric stoves.

The principal object of this invention is to provide an oven, the interior of which is formed of an integral sheet of metal and yet is so supported that the same will retain its shape in spite of the high temperature heat to which it is subjected.

Another object is to construct an oven with the interior separate from the rest of the stove and yet will present a tight fitting construction which is far superior to the present oven, and wherein the maximum amount of heat is retained.

Still another object is to provide a very rigid construction wherein allowance is made for expansion and contraction of the walls of the oven without lessening the rigidity of the construction.

Another object is to provide means whereby the interior of the oven may be drawn toward the rear so that its front flange will be tightly held against the front face of the exterior of the oven.

Still another object is to provide a single means for securing the top of the oven in place.

Other objects will be disclosed in the specification and claims.

One of the problems always present in connection with the construction of ovens is to provide a structure that will retain the maximum of heat and at the same time allow for the expansion and contraction of the oven without losing its rigidity of construction which is essential. By making the interior of the oven separate, and of an integral sheet of metal, there is less chance for the transmission of heat either by radiation or conduction. By placing the securing means at the top and bottom and leaving the central portion free with a space behind for expansion and contraction, a very rigid construction is obtained without preventing the necessary expansion and contraction due to the high temperature.

In the drawings:

Figure 1 is a perspective of the oven with the top and door removed;

Figure 2 is a perspective of the rear of the oven with the back plate removed;

Figure 3 is a perspective of the front plate of the oven removed therefrom;

Figure 4 is perpendicular section of the oven, taken on line 4—4 of Figure 5;

Figure 5 is a vertical section taken on line 5—5 of Figure 4;

Figure 6 is a fragmentary horizontal section taken on line 6—6 of Figure 4;

Figure 7 is a fragmentary section showing the means for securing the top of the oven in place;

Figure 8 is a fragmentary horizontal section taken on line 8—8 of Figure 4;

Figure 9 is a detailed perspective of the supporting plate attached to the rear of the oven; and

Figure 10 is a perspective of the back plate of the oven.

Referring to the drawings:

Numeral 1 designates an oven having an interior liner 2, with corrugations 3 in the form of shelves. The interior liner 2 has a flange 4 which rests against the face of a front plate 5 of the oven 1. At the rear of the interior liner 2 is secured a U-shaped member 6, which seats in a U-shaped bar 7 secured to the oven frame 8′. The U-shaped member 6 forms an integral part of a brace member 8 which is secured at the top and bottom of the interior liner 2 at 9 and 10. A screw threaded member 7′ passes through the U-shaped bar 7 and U-shaped member 6 securing the two together, and at the same time, furnishing means whereby the entire interior liner may be pulled back toward the rear causing the flange 4 to rest snugly against the front plate 5 of the oven 1.

This serves a second function of preventing the buckling outwardly of the rear wall of the interior liner, as the expansion is limited by the brace member 8. The U-shaped member 6 is so made that it is normally out of engagement with the back of the U-shaped bar 7 so as to allow for the drawing back of the interior liner and at the same time to allow for the expansion of the rear wall of the interior liner in that direction. The frame 8 with its side supports

10′ and transverse member 7 provides a very rigid support. Openings 11 in frame 8 permit the oven terminal and contact clips 12 to extend therethrough. A rear plate 13 forms a cover plate for the oven 1. An oven cover 14 having flanged edges 15 seats over the top and along the side of the oven 1. A threaded screw 16 is positioned centrally at the rear of the cover and after passing through the cover 14 is threaded through a bar 17 until it seats against the back plate 13. Pressure exerted by the turning of the screw 16 will draw the cover plate 14 to the rear, making a snug fit in the front and along the sides.

The space between the interior liner and the oven proper is filled with the usual heat insulating material and by making the interior liner of a separate piece of material spaced from the rest of the oven, the points of contact are very few, thus cutting down the loss of heat by way of conduction.

The front of the interior liner is held in place by the flange 4 which extends around the front face of the oven and leaves the rest of the liner suspended from the oven until the extreme rear is reached where the U-shaped member 6 seats in the U-shaped bar 7. The corrugations 3 may be used to support different oven pans as well as to permit the insertion of the heating unit at various heights according to the desires of the operator.

The particular oven described herein presents one of the most efficient and durable constructions of its kind, wherein the housewife gets the greatest heating efficiency and at the same time, the oven is so constructed that it can be readily serviced.

Having thus described my invention, what I claim is:

1. An oven construction comprising an exterior casing, an interior liner supported by said exterior casing, a cross bar secured to said exterior casing, a supporting member secured to said interior liner, and means for securing said supporting member and said cross bar to each other.

2. An oven construction comprising an exterior casing, an interior liner supported by said exterior casing, a cross bar secured to said exterior casing, a supporting member secured to said interior liner and seated in said cross bar, and means for adjustably securing said supporting member and said cross bar to each other.

3. An oven construction comprising an exterior casing, an interior liner supported by said exterior casing, said interior liner having a flange extending around its outer face, a cross bar secured to said exterior casing, a supporting member secured to said interior liner, means for adjustably securing said supporting member and said cross bar to each other, said means drawing the flange on the interior liner against the outer face of said exterior casing.

4. An oven construction comprising an exterior casing, an interior liner supported by said exterior casing, a U-shaped cross bar secured to said exterior casing, a supporting member secured to said interior liner and seated in said U-shaped cross bar and means for adjustably securing said supporting member and said cross bar to each other.

5. An oven construction comprising an exterior casing, an interior liner supported by said exterior casing, a U-shaped cross bar secured to said exterior casing, a brace plate secured to said interior liner, said brace plate having side flanges and a U-shaped cross member formed integral with said brace plate, said U-shaped cross member seated in said U-shaped cross bar and means for adjustably securing said supporting member and said cross bar to each other.

6. An oven comprising an outer casing, having its opposite ends open, an inner casing having only one end open and having a flange around its open end adapted to contact with and be supported by one of the open ends of the outer casing, a support extending across the other open end of the outer casing, and means adjustable on said support to hold said inner casing supported in the outer casing with its flange in contact with the first named open end thereof.

7. An oven construction comprising an exterior casing, a cover plate to fit over the top of said casing, said cover plate having flanges extending around the top of said casing, means threadedly secured in one flange of said cover plate, said means projecting through said flange and bearing against the said casing, whereby the cover plate will be drawn tight against said exterior casing.

8. An oven construction comprising an exterior casing, an interior liner within said casing, a supporting member secured to said interior liner at top and bottom so as to leave the middle portion of said liner free, means on said casing for supporting said member.

9. An oven construction comprising an exterior casing, an interior liner supported by said exterior casing, a cross bar secured to said exterior casing, a supporting member secured to said interior liner at top and bottom, and means for securing said supporting member and said cross bar to each other.

In testimony whereof I affix my signature.

FREDERICK WILLIAM CUFFE.