Nov. 4, 1924. 1,514,027

J. W. WILLIAMS

OVEN

Filed Oct. 23, 1923 3 Sheets-Sheet 1

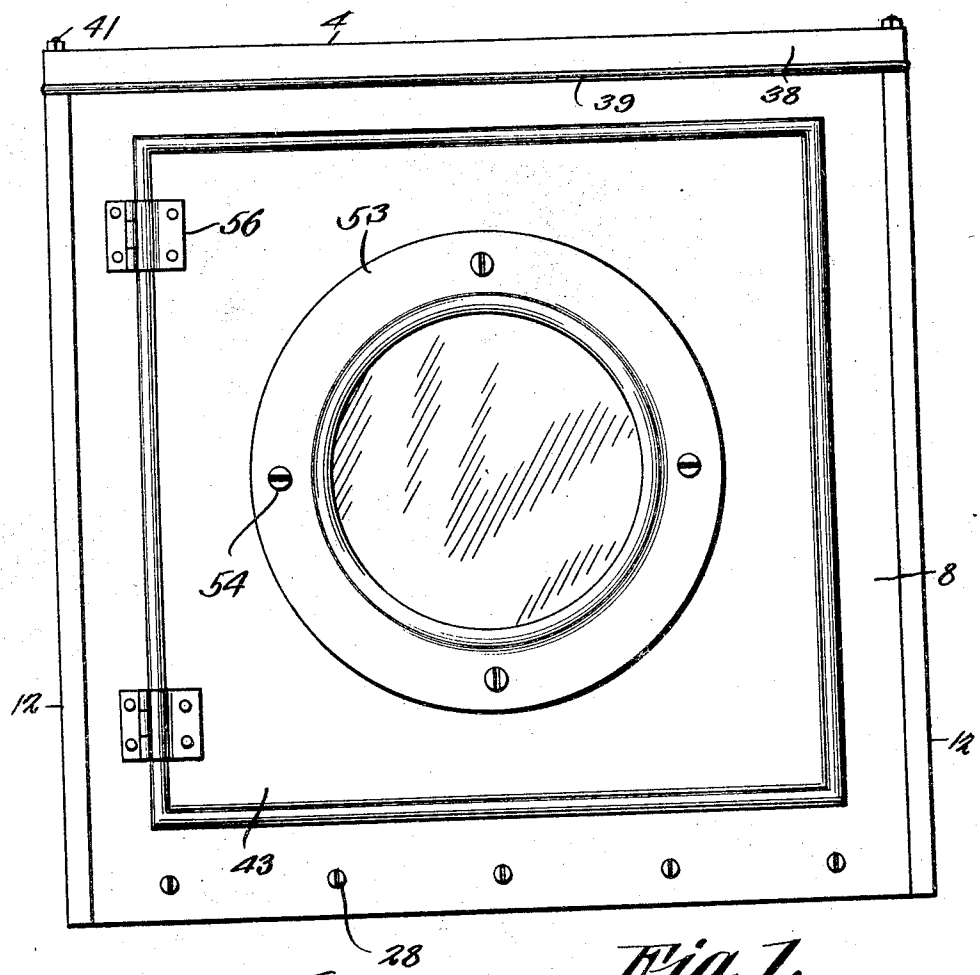


Fig. 1.

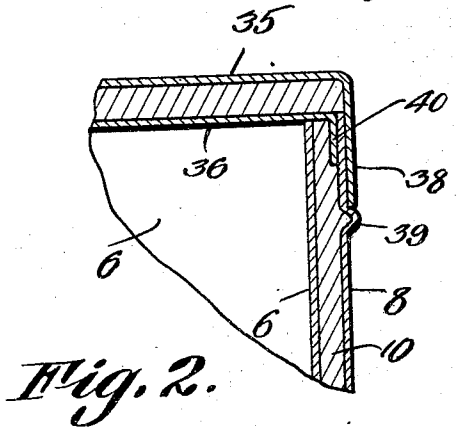


Fig. 2.

J. W. Williams

Inventor

By Cachow & Co.

Attorneys

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OVEN

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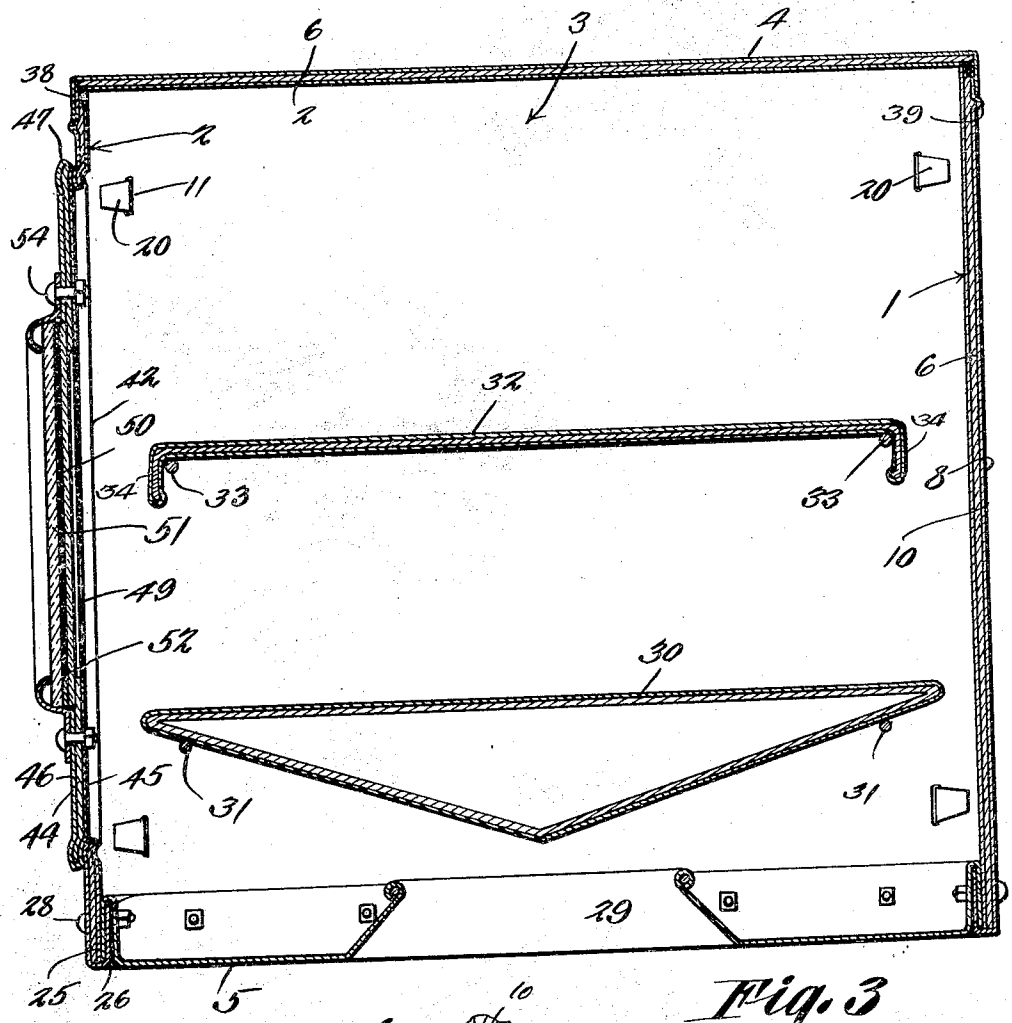


Fig. 3

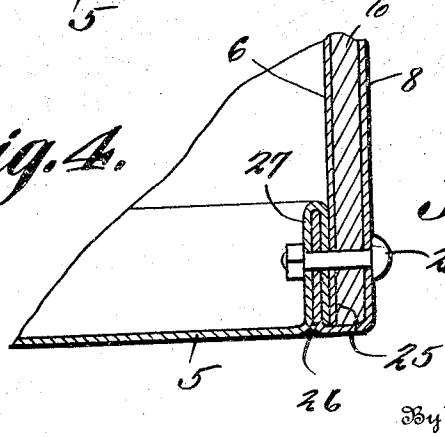


Fig. 4.

J. W. Williams

Inventor,

By Cachow & Co.

Attorney

Nov. 4, 1924. 1,514,027

J. W. WILLIAMS

OVEN

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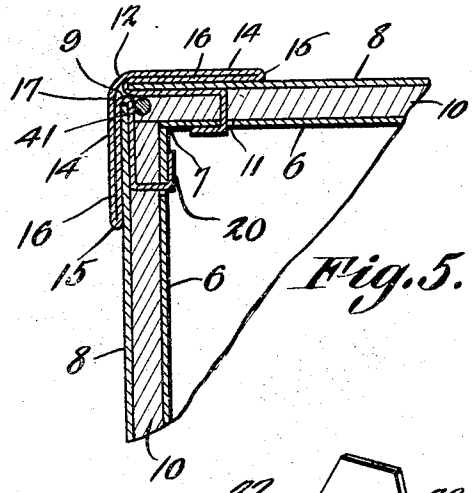


Fig. 5.

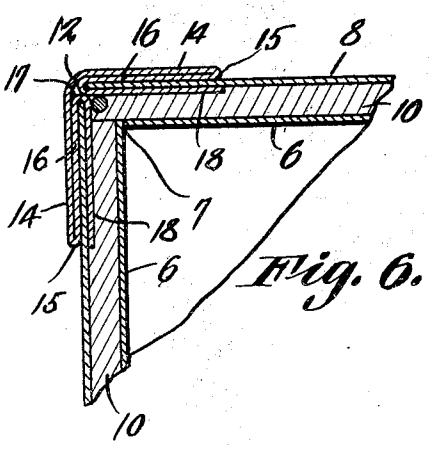


Fig. 6.

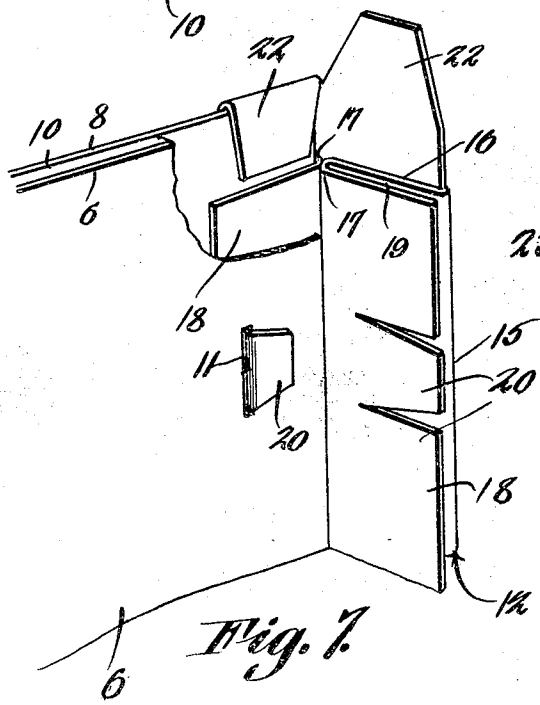


Fig. 7.

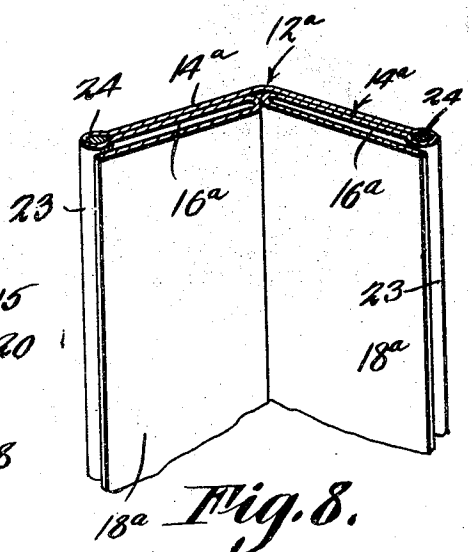


Fig. 8.

J. W. Williams

Inventor,

By C. A. Snow & Co.

Attorneys.

Patented Nov. 4, 1924. 1,514,027

UNITED STATES PATENT OFFICE.

JOHN W. WILLIAMS, OF SAN ANTONIO, TEXAS.

OVEN.

Application filed October 23, 1923. Serial No. 670,298.

To all whom it may concern:

Be it known that I, JOHN W. WILLIAMS, a citizen of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented a new and useful Oven, of which the following is a specification.

The device forming the subject matter of this application is an oven and one object of the invention is to improve the corner pieces whereby the walls of the oven are joined. Another object of the invention is to provide novel means for mounting the top of the oven on the walls.

A further object of the invention is to improve the connections between the bottom and the walls of the oven.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that, within the scope of what is claimed, changes in the precise embodiment of the invention shown can be made without departing from the spirit of the invention.

In the accompanying drawings:

Figure 1 shows in front elevation, an oven constructed in accordance with the invention; Figure 2 is a vertical section, fragmental in nature, and showing the joint between the top and the walls; Figure 3 is a vertical transverse section taken through the oven from the front to the back thereof; Figure 4 is a fragmental sectional detail illustrating the joint between the bottom and the walls; Figure 5 is a section taken through one corner of the oven in a plane passing through the tongues of the corner piece; Figure 6 is a section taken on a plane which is spaced from the cutting plane of Figure 5; Figure 7 is a perspective disclosing the corner piece joined to one of the walls, parts being broken way; Figure 8 is a perspective wherein a modified corner piece appears.

The oven forming the subject matter of this application is made of metal throughout saving as otherwise designated, and includes a back 1 a front 2 sides 3 and a top 4. The back 1, the front 2 and the sides 3 may be alluded to as walls. The bottom of the oven is marked by the numeral 5.

The body of the oven comprises an inner layer 6, the layers 6 abutting at each corner of the oven as indicated by the reference numeral 7 in Figures 5 and 6. Each wall includes an outer layer 8 there being a space 9 between the edges of the layers 8 at the corner of the oven. Between the layers 6 and 8 a packing 8 of heated insulating material is mounted. Vertically elongated slots 11 are fashioned in the inner layers 6.

Angular corner pieces 12 are provided, each corner piece including outer wings 14 located at right angles to each other, the wings 14 being bent as at 15 to form inner flanges 16 lying against the inner surfaces of the wings 14, the flanges being bent as at 17, to form lips 18 disposed parallel to the flanges 16, and spaced therefrom as shown at 19. The lips 18 are notched in their edges, as shown at 20 in Figure 7, to form bendable tongues 21. Bendable tongues 22 are fashioned on the upper ends of the outer wings 14 of the corner pieces 12.

The inner flanges 16 of the corner pieces 12 lie against the outer layers 8 of the walls, as clearly shown in Figures 5 and 6, the walls extending into the space 19 between the inner flanges 16 and the lips 18. The tongues 20 extend through the packing 10 and through the parts 11 in the inner layers 6 and are bent or clinched upon the inner layers 6 as shown in Figure 7. The tongues 22 are bent downwardly over the upper edges of the outer layers 8, as indicated in Figure 7. It will be clear from the foregoing, that the corner pieces 12 constitute a simple but efficient means for joining the walls of the oven at the vertical corners thereof.

In Figure 8 of the drawings a modified form of corner piece is shown, this corner piece being of the construction hereinbefore described, saving for the fact that at the places of juncture between the parts 14^a and 16^a sockets 23 are fashioned, the same being adapted to receive rods or bolts which may be used for joining the top and the bottom of the oven to the walls. In Figure 8, parts hereinbefore described have been designated by numerals previously used, with the suffix "a".

Referring to Figure 4, the outer layers 8

of the walls are extended as at 25 across the lower edges of the packing 10 and the inner layers 6, and are provided with upstanding flanges 26 received within hook-shaped beads 27 formed on the bottom 5, securing elements 28 passing through the parts 27, 26, 6, 10 and 8. The bottom 5 may be supplied with an inverted funnel-shaped inlet 29, above which is disposed a hollow inverted conical deflector and shelf 30, the same being supported at 31 on the walls of the oven. A shelf 32 is located above the member 30 and is mounted on the supports 33 carried by opposite walls of the oven, the shelf having depending portions 34, between which the supports 33 are located. Both of the parts 32 and 30 may be fashioned from a combination of metal and heat insulating material, if desired, as shown in Figure 3.

The top 4 comprises, as shown in Figure 2, an upper layer 35 and a lower layer 36, between which a heat insulating packing 37 is disposed. The upper layer 35 has a depending flange 38 overlapped on the outer surface of the outer layer 8 of each wall and extended downwardly to an outwardly projecting rib 39 formed on the layer 8. The layer 36 of the top extends across the upper edge of the inner layer 6 of the wall and is provided with a depending flange 40 abutting against the inner surface of the outer layer 8 of the wall. If desired, the top and the bottom may be held in place by securing devices or bolts 41 located at the corners of the oven, as shown in Figure 5, although the use of these bolts is not insisted upon.

The front 2 of the oven is constructed like the sides and the back and is supplied with an opening 42 closed by a door 43, comprising an outer layer 44, an inner layer 45, and a packing 46 therebetween, the layers 45 and 44 being connected about the periphery of the door as shown at 47. There is an opening 49 in the door, and the inner layer 45 and the packing 46 extend inwardly beyond the outer layer 44 to form a shoulder 48 against which abuts a pane 50 made of glass if desired, the periphery of the pane being engaged by an outer layer 44 as clearly shown in Figure 3. A transparent pane 51 is located parallel to the pane 50 a gasket 52 being interposed between the panes if desired. A frame 53 is attached by securing devices 54, to both layers of the door, and is supplied with a hook-shaped flange bearing against the outer pane 51. Hinges 56 are secured to the door and to the front 2 as disclosed in Figure 1.

The oven forming the subject matter of this application is simple in construction and strong and will maintain its shape even under a high degree of long-continued heat.

What is claimed is:

1. In a device of the class described inner and outer layers, the inner layers having openings, a packing between the layers, corner pieces including outer wings, the wings being bent to form inner flanges disposed parallel to the wings, the flanges being bent to form lips disposed parallel to the flanges and spaced from the flanges, the outer layers of the walls being received between the lips and the flanges, the lips being provided in their edges with bendable tongues extended through the packings and through the openings of the inner layers of the walls and clinched upon the inner layers, wings of the corner pieces being provided at their ends with bendable tongues engaged across the upper edges of the outer layers of the walls.

2. In a device of the class described, walls comprising an inner layer, an outer layer and a packing therebetween, the outer layer being extended across the edge of the packing and across the edge of the inner layer and being extended to form a flange disposed parallel to the inner layer and spaced from the inner layer and a bottom provided with an upstanding hook-shaped flange within which the first specified flange is received, a portion of the hook-shaped flange lying between the first specified flange and the inner layer.

3. In a device of the class described, a wall comprising an inner layer, an outer layer, and a packing therebetween, a top comprising an upper layer, a lower layer and a packing therebetween, the upper and lower layers of the top being provided with depending flanges, the upper edge of the outer layer of the wall being received closely between the flanges, the packing in the top extending outwardly to one of said flanges, and the packing in the wall extending upwardly to the lower layer of the top.

4. In a device of the class described, a wall comprising an outer layer an inner layer and a packing therebetween, the outer layer being provided with a laterally projecting rib, a top comprising an upper layer, a lower layer, and a packing therebetween, the upper and lower layers of the top being supplied with depending flanges, between which the outer layer of the wall is received, one of said flanges extending downwardly into abutment with the rib.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN W. WILLIAMS.

Witnesses:
CHAMPE G. CARTER,
RANDOLPH L. CARTER.