

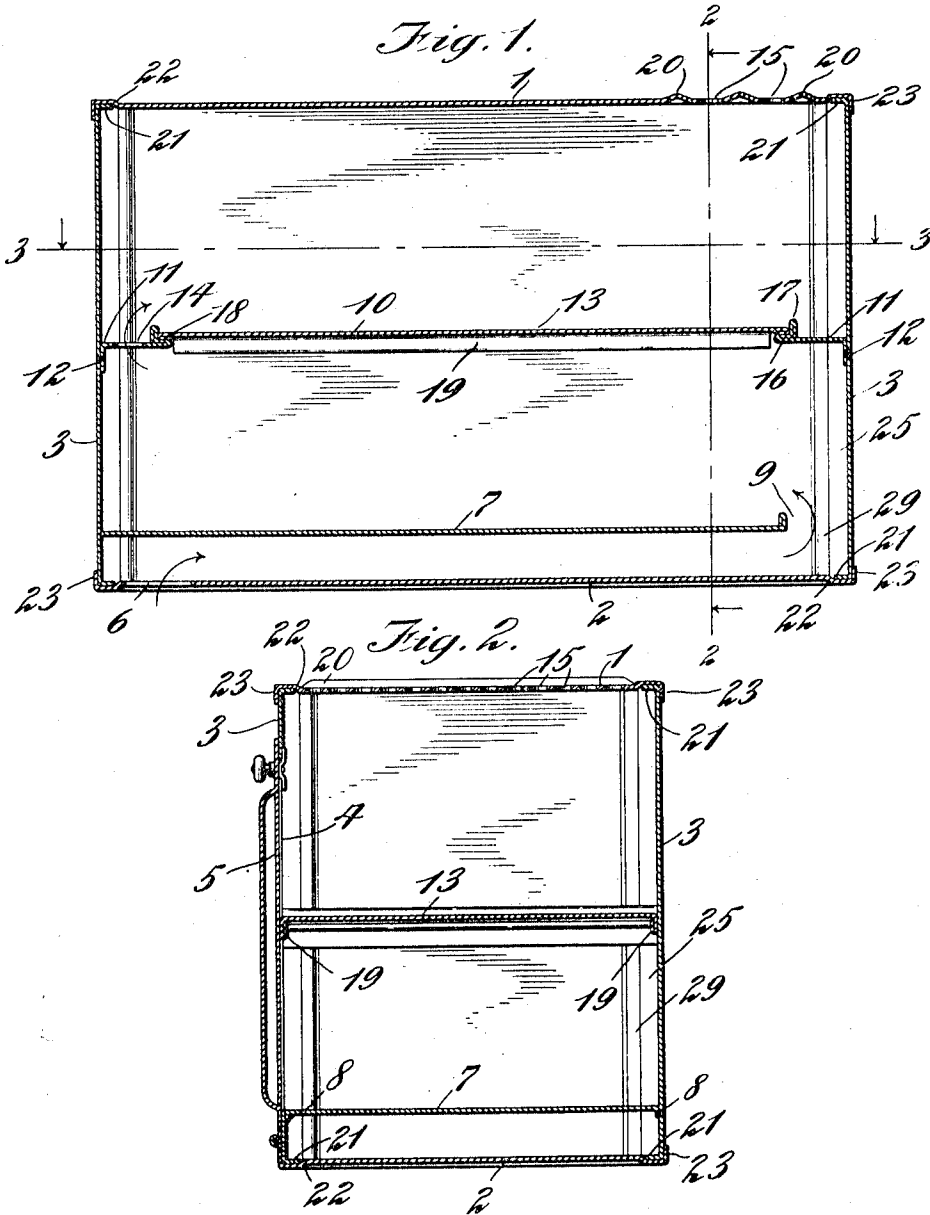
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OVEN.

APPLICATION FILED APR. 18, 1910.

1,040,855.

Patented Oct. 8, 1912.

2 SHEETS-SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 3.

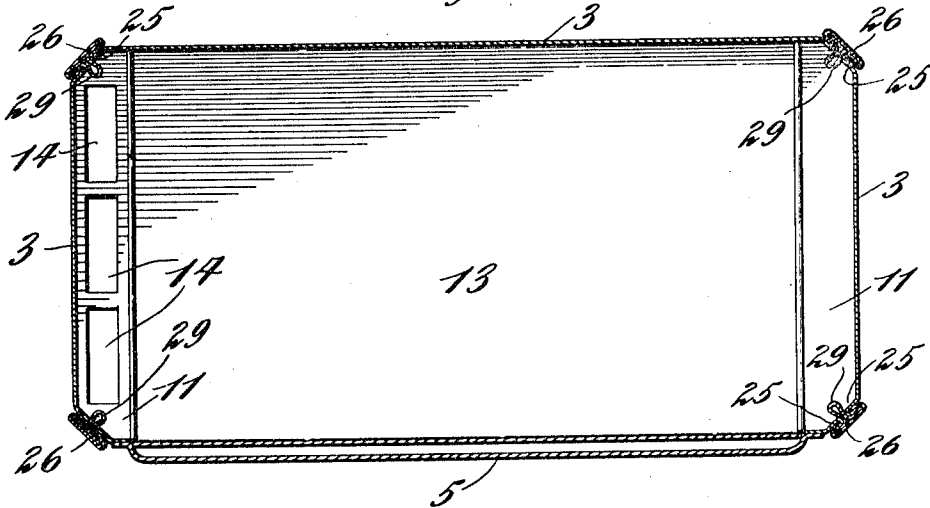


Fig. 4.

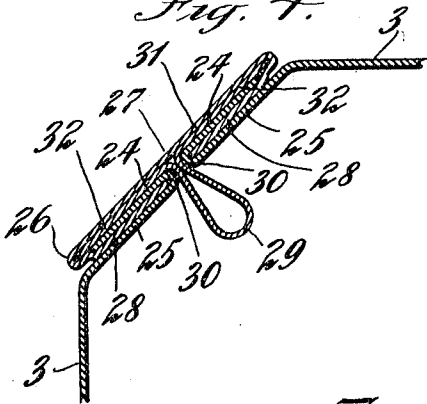


Fig. 5.

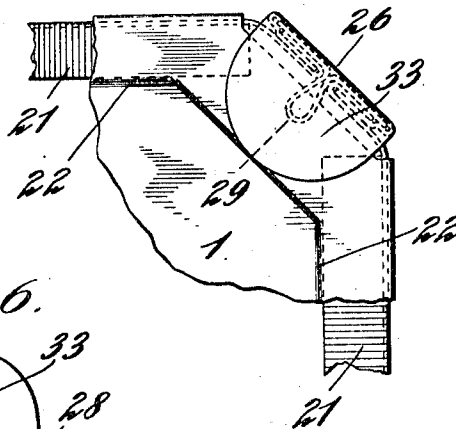
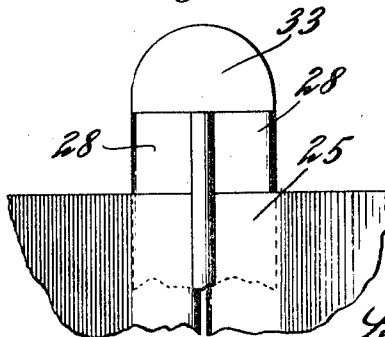


Fig. 6.



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UNITED STATES PATENT OFFICE.

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OVEN.

1,040,855.

Specification of Letters Patent.

Patented Oct. 8, 1912.

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To all whom it may concern:

Be it known that I, LEWIS F. BETTS, a citizen of the United States, and resident of the city of New York, borough of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Ovens, of which the following is a specification.

This invention relates to portable, sheet metal ovens, designed for use particularly in connection with oil, gasolene, gas and similar stoves.

A primary object of the invention is to produce a simple, cheap, and strong oven of this type.

A further object is to facilitate assembling and taking apart of the oven.

A further object is to provide for improved circulation of heated air through the oven.

A further object is to provide improved locking means for connecting the walls of the oven or the walls of other sheet metal containers.

With these and other objects in view, the invention consists in the constructions, arrangements and combinations hereinafter described and in the claims more fully pointed out.

In the accompanying drawings showing the preferred embodiment of the invention: Figure 1 is a vertical, longitudinal section through the oven; Fig. 2 is a vertical, transverse section therethrough, on the line 2—2 of Fig. 1, looking in the direction of the arrow; Fig. 3 is a sectional plan, taken on the line 3—3 of Fig. 1; Fig. 4 is a horizontal section through one of the vertical corners of the oven, showing the locking device; Fig. 5 is a plan view of one corner of the oven; and Fig. 6 is a fragmental elevation of the upper adjacent portions of two side walls, showing a portion of the locking device slightly raised and with its end flange extending straight upward.

Referring to these views, the numeral 1 indicates the top wall, 2 the bottom wall, and 3 the four side walls, of which the front wall has a door opening 4, closed by a suitable door 5, as is customary. All these walls are of sheet metal.

The bottom wall 2 has a hot air inlet opening 6 near one end. Above and near the bottom wall is a horizontal partition 7, which may be supported by the side walls

as indicated at 8, and which presents an opening 9 at the other end from the opening 6. Another horizontal partition 10 is located substantially centrally of the space between the partition 7 and the top wall 1, and comprises supporting ledges 11, removably secured to the side walls as indicated at 12, and a solid shelf 13 removably and slidably supported on these ledges. One of these ledges 11 is provided with an opening, or a series of openings, 14, which are remote from the opening 9. The top wall 1 has an outlet opening, or a plurality of outlet openings 15, disposed at the other end of the oven from the openings 14.

The number and particular construction of the horizontal walls 1, 2, 7 and 10 may be varied widely. The important feature is the provision of openings in the oven in remote staggered relation, so that heated air travels in zig-zag fashion through the oven.

The sheet metal ledges 11 may have their inner marginal regions bent back horizontally upon themselves, as indicated at 16, and then upward and downward as indicated at 17, thus presenting a reinforced angular slide-way. The cooperating portions or margins of the shelf 13 may be bent back flat upon the body, as indicated at 18. The front and rear margins of the shelf 13 may be bent down and then up, as indicated at 19, thus affording finger holds for facilitating pulling the shelf out and returning it.

In the region of the outlet openings 15, the top wall 1 is bent to present projections 20, preferably in the nature of parallel corrugations extending between adjacent rows of openings, whereby cooking utensils may be supported on these projections over the openings 15, without closing the latter, thus enabling the heat that would otherwise be wasted to be utilized, without checking the draft through the oven. The openings 15 are confined to a minor portion of the area of the top wall 1, so that sufficient hot air passes through this region to serve satisfactorily for warming purposes.

In the best embodiment of the invention, the side walls 3 have inturned, horizontal, top and bottom flanges 21; and the top and bottom walls 1 and 2 have marginal channels 22 of substantially the same width as these flanges and receiving the same. Further the top and bottom walls have vertical marginal flanges 23, which embrace the side

walls 3. These features contribute materially to the rigidity of the structure.

The means for separably locking the walls together will now be described. The adjacent margins of the side walls 3 are bent back upon themselves to present flanges 24. In the best embodiment of the invention, these flanges are substantially parallel to the underlying wall portions 25; and these portions 25 are inclined to the planes of the major portions of the side walls, to present beveled corners, as clearly shown in Figs. 3, 4 and 5. A sheet metal locking member 26, preferably substantially flat, overlies each beveled corner and connects the walls together. In the embodiment of the invention illustrated, this locking member consists of a flat body or vertical strip 27, the margins of which are bent toward each other to present flanges 28, which interlock with the flanges 24, and which are clasped between these flanges 24 and the wall portions 25.

In the embodiment of the invention illustrated the complete corner locking device presents also a locking and stiffening rib 29, which projects between the flanges 28 and the folded edges 30 of the walls 3. This rib greatly stiffens the corner, and prevents one of the walls 3 from becoming separated from the locking device by riding over the margin of the other wall. In the best form of the invention, the corner locking device is a two-part device, comprising, in addition to the member 26, a member 31, which is bent from sheet metal to present the twoply rib 29, and oppositely directed flanges 32. These flanges 32 are clasped between the flanges 24 and the body 27.

The member 26 carries, at top and bottom, end flanges 33, which are bent over the corners of the top and bottom walls 1 and 2, thus holding these walls to the side walls 3. However, the construction of the corner locking devices whereby they hold also the top and bottom walls is susceptible of variation.

The operation of the oven for cooking

purposes will be obvious, and has, in fact, been described with the description of structure.

The oven may be readily assembled and taken apart. To knock down, the flanges 33 are bent vertically, as shown in Fig. 6. The top and bottom walls may now be lifted away. A convenient way to release the side walls from the corner locking devices is to grasp the rib 29 and pull out the member 31. This leaves the wall flanges 24 loosely held by the member 26, and facilitates sliding the walls vertically out of the member 26, or vice-versa.

What is claimed as new is:

1. A portable oven, consisting of a sheet metal box having, in combination side and end walls, a bottom part, provided with a hot air inlet and a horizontal partition extending between the end walls and having one end spaced from one of said end walls to form an air passage, a second horizontal partition comprising a shelf and supporting ledges for said shelf, each of said ledges having their marginal edges bent back horizontally upon themselves and then upward and downward to form angular slide ways, one of said ledges having an opening, and said oven having an outlet in its upper portion whereby the heated air will travel in zig zag fashion through the oven.

2. A portable oven, consisting of a sheet metal box having in combination, side and end walls, a plurality of partitions within said walls, one of said partitions comprising a shelf and supporting ledges for said shelf, said ledges having their marginal edges bent back, horizontally upon themselves and then upward and downward to form angular slide ways.

Signed at Brooklyn, N. Y., in the county of Kings and State of New York, this 8th day of April, 1910.

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