

P. J. McMORROW.

OVEN.

APPLICATION FILED JULY 31, 1911.

1,028,242.

Patented June 4, 1912.

3 SHEETS—SHEET 1.

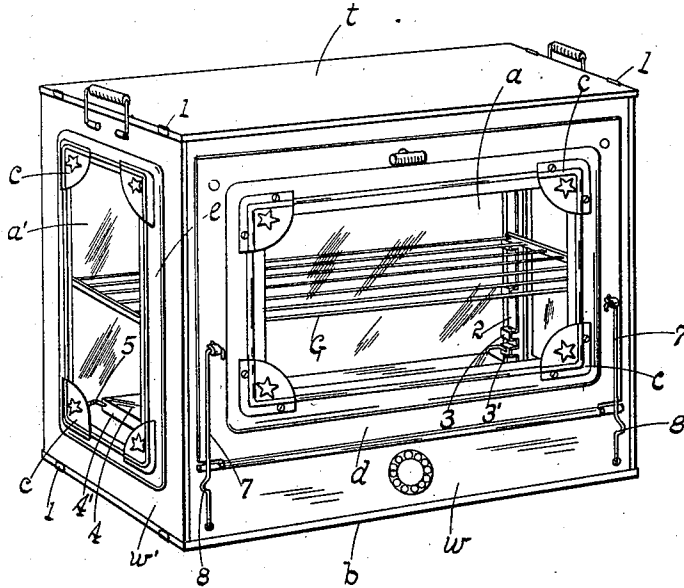


FIG. 1.

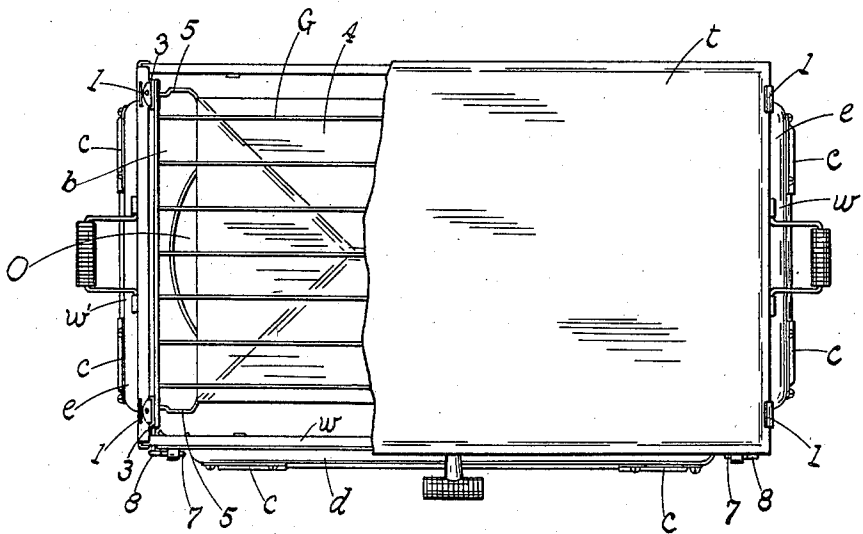


FIG. 2.

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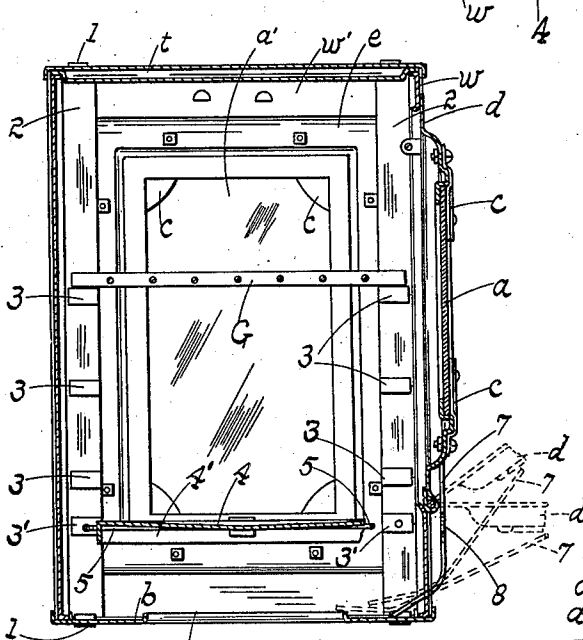
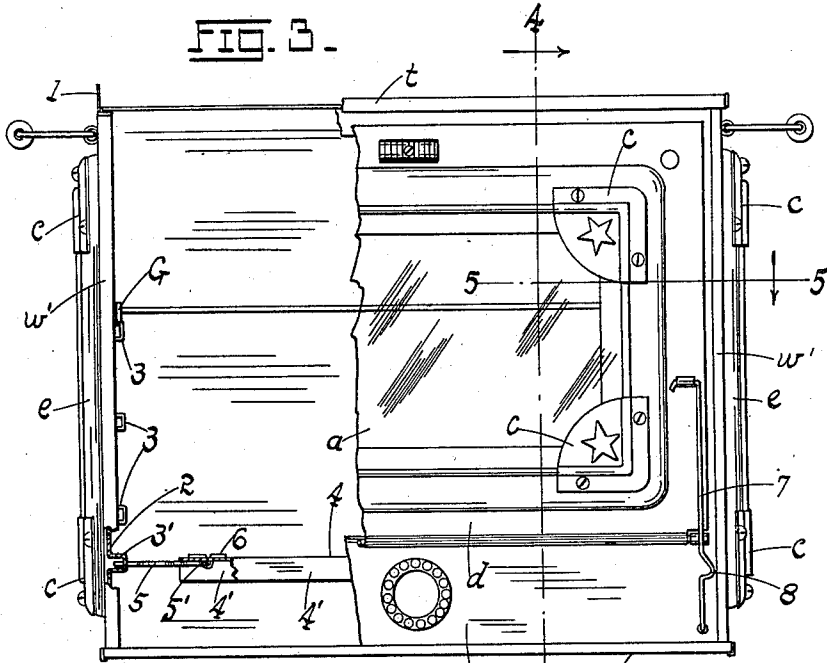
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3 SHEETS-SHEET 2.

FIG. 3.



WITNESSES:

FIG. 4.

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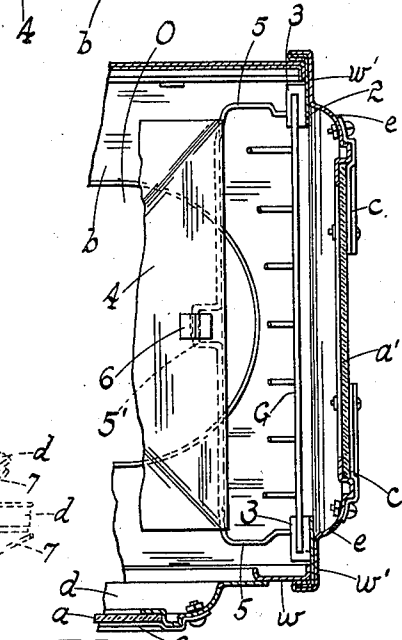


FIG. 5.

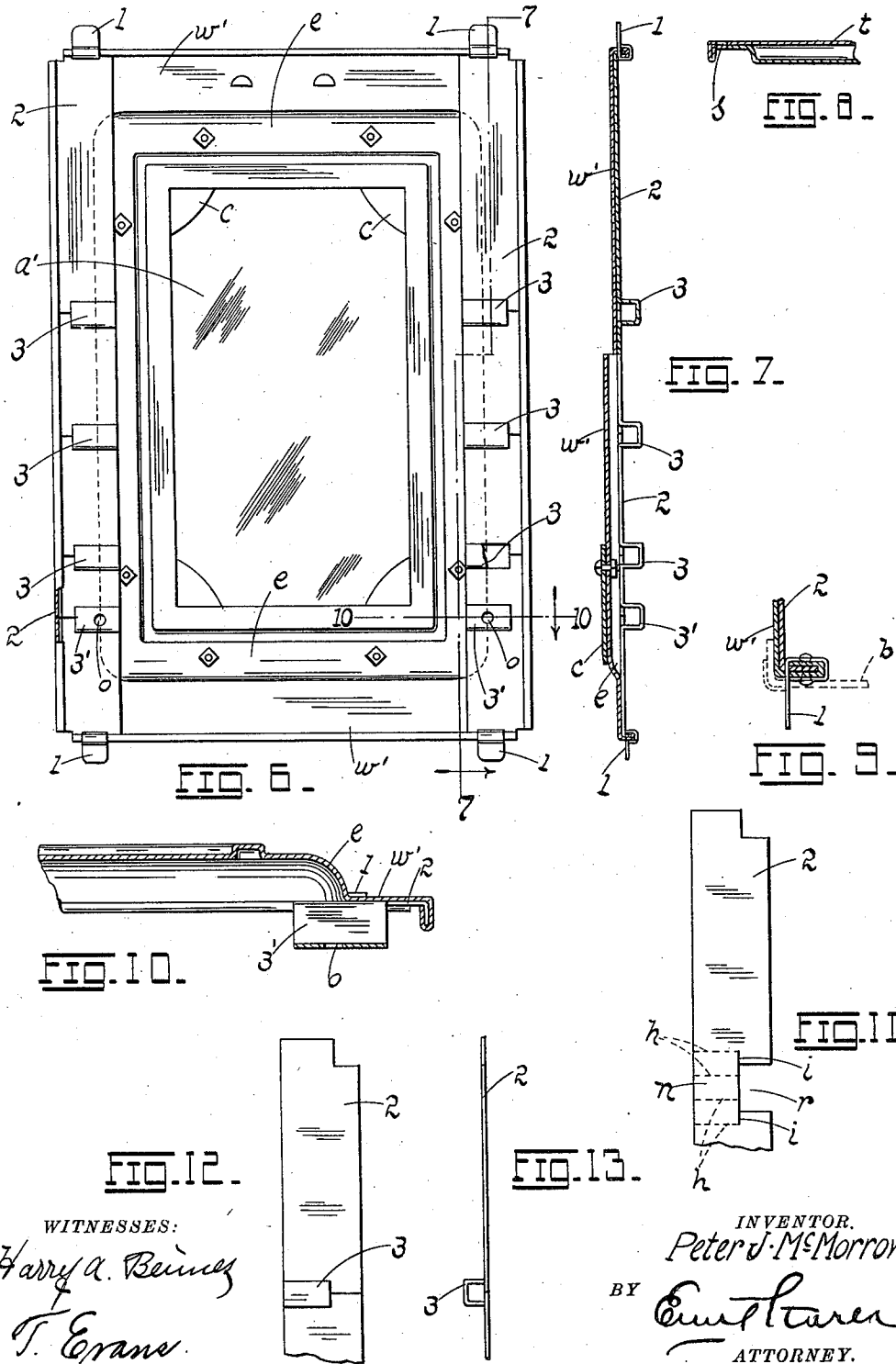
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3 SHEETS-SHEET 3.



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OVEN.

1,028,242.

Specification of Letters Patent.

Patented June 4, 1912.

Application filed July 31, 1911. Serial No. 641,516.

To all whom it may concern:

Be it known that I, PETER J. McMORROW, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Ovens, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in ovens; and it consists in the novel details of construction more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a perspective of my improved oven; Fig. 2 is a top plan, with a portion of the roof plate removed; Fig. 3 is a front elevation with a portion of the front wall and oven-door removed; Fig. 4 is a vertical transverse section on the line 4—4 of Fig. 3; Fig. 5 is a horizontal sectional detail on the line 5—5 of Fig. 3; Fig. 6 is an inside elevation of one of the end oven-walls detached; Fig. 7 is a vertical section on the line 7—7 of Fig. 6; Fig. 8 is a sectional detail of the edge of the roof-plate; Fig. 9 is an enlarged sectional detail of the bottom of the ledge-strip by which the oven grates are supported; Fig. 10 is a horizontal sectional detail on the line 10—10 of Fig. 6; Fig. 11 is an elevation of a portion of the vertical ledge-strip blank as it appears before the ledges are struck up or pressed from it; Fig. 12 is a similar view showing the ledges formed in the strip and showing the original blank shortened as a result of the ledge formation; and Fig. 13 is an edge view of Fig. 12.

The present improvement is particularly directed (though not restricted) to knock-down ovens preferably made of sheet metal sections united by tongue and groove joints, a feature well understood in the art and not here claimed.

One of the objects of my invention is to provide the end walls of the oven with glass (or equivalent transparent) panels so that light may enter in the oven from all sides

and thus permit the contents to be observed, it being understood that the front door of the oven is likewise provided with a glass window.

A further object is to provide means for supporting the grates on which the articles are cooked or baked, without the danger of said grates coming in contact with the glass sides of the oven, said grate-supporting means being likewise availed of to support the necessary deflecting plate or heat distributor placed at the bottom of the oven.

A further object is to provide the hinged oven door with means for arresting the same when the door reaches a substantially horizontal open position; and further to introduce other features the advantages of which will be better apparent from a detailed description of the invention, which is as follows:

Referring to the drawings, *w* represents the front wall, and *w'* the end walls of the oven, the front wall being provided with a hinged door *d* having a glass or other transparent panel *a* forming a window therefor. The end walls *w'* are provided with glass windows *a'* set in a frame *e* embossed in the wall (the oven being usually of sheet metal) and held in position by corner pieces *c*. The glass in the door of the front wall is similarly secured, this being a structural detail not herein claimed. The present oven being of the knock-down variety, the usual method of uniting the several vertical walls by tongue and groove connections is here resorted to, such detail not being herein claimed as it is understood in the art. The top or roof plate *t* and the plate *b* constituting the bottom of the oven are united to the vertical walls by means of clips 1, riveted to the flanged and folded edges of the vertical walls, the tongues of the clips being passed through slots *s* (Fig. 8) formed along the edges of said plates *t* and *b*, after which the tongues are bent down against the vertical walls thus securing the plates forming the top and bottom of the oven, in position. The plate *b* has a central opening *O* for the pas-

sage of the combustion products which may emanate from any conventional form of gas or vapor burner.

It will be seen (Figs. 1, 5) that the glass panels a' of the end vertical oven walls take up the greater portion of the wall, thus removing the usual means for supporting the removable grates or shelves G of the oven. Accordingly, some provision must be made to support the grates from the end walls without disturbing the glass a' and without permitting the grates to touch the glass. For this purpose I dispose on the inner face of each end wall, and on each side of the glass panel a' , a vertical strip 2 (preferably, though not necessarily, of sheet metal) the original blank forming the strip having portions removed along the outer edge thereof thus forming recesses r (Fig. 11). This leaves a neck of metal n opposite each recess. Subsequently the strip is folded transversely along the dotted lines h indicated in Fig. 11, whereby there results an open ledge 3 (Figs. 12, 13) the gap between the sides of the recess r thus closing up, the fold-lines h being so placed as to bring the sides of the recess r together edge to edge when the ledge 3 is finally formed. As seen best in Fig. 11, the ends of the inner edge of the neck n extend beyond the sides of the recess r , the extensions being defined by the slits i, i , cut in the blank on each side of the base of the recess. The extreme fold-lines h, h , terminate at the inner ends of the slits i, i . The grate-supporting surface of the finished ledge 3 obviously is that included between two contiguous fold-lines h, h . The preferred (though not the only) method of fastening the strip 2 to the wall w' is to fold and clench the outer edge of the wall w' over the outer edge of the strip as seen to best advantage in Fig. 10. The strip might of course, be secured in any other mechanical manner. In the illustration are shown three grate-supporting ledges 3 for each strip 2, there being a bottom ledge 3' serving as a support for the spreader or deflecting plate 4 mounted in the oven above the opening O . The vertical walls of the bottom set of ledges 3' are provided with perforations o for the reception of the terminal arms of the wire brackets 5 fastened to, and extending from the spreader 4. The preferred manner of securing the brackets 5 to the plate 4 is to pass the ends of the bracket through the side flanged portions 4' of the plate, the body of the bracket being concealed behind the terminal flange of the plate (Figs. 1, 2, 4, 5). The ends or arms of each bracket are then inserted into the openings o of the ledges 3', when the plate 4 remains suspended above the oven bottom. To additionally fasten the bracket to the deflector 4, I preferably form at the center thereof an offset or U-shaped bend 5'

about which I pass a clip 6, passing the clip through a slit in the plate 4, and turning down the ends of the clip against the plate (Figs. 3, 5), the clip serving as an anchor for the bracket.

Hinged to the sides of the door d and playing freely through openings formed in the wall w , are links 7, the free inner ends thereof riding freely on top of the bottom b of the oven. At a convenient point on each link is formed a bend 8 as shown, the base of the bend serving as an arresting shoulder for the door when the latter has been swung to a substantially horizontal position. By that time, the bend 8 strikes the face of the wall w , thus preventing further downward movement of the door. Of course, the point of arrest of the door depends on the position of the bend 8, but in practice should be such as to allow the door to drop to a horizontal position. (See dotted position of the parts in Fig. 4). To allow the link 7 to work freely through the wall of the oven, the link should be bent properly for the purpose (Fig. 4).

Of course, the grates G and spreader plate or deflector 4 should be placed in position before the top t is attached, and preferably should be positioned while setting up the sides of the oven. The particular order of assembling the parts however, rests with the person setting up the oven, though in practice it is desirable that the bottom b be attached to the end vertical walls first.

Features shown but not described are understood in the art, and a description thereof is not here necessary.

With the present design of oven, light can readily penetrate the interior thereof through the glass windows a, a' , and the articles baked or cooked can be watched from a considerable distance. The deflector 4 being dish-shaped serves as a drip-pan for any juices which may drop from the articles being cooked.

Having described my invention, what I claim is:—

1. In an oven having end walls provided with transparent panels, strips on opposite sides of the panels having their outer edges clenched to the edges of the walls, and provided with ledge formations disposed along their inner edges.

2. In an oven having end walls provided with transparent panels, vertical strips on opposite sides of the panels, ledges on the strips for supporting suitable grates, a bottom deflector plate and drip pan, and brackets on said plate terminating in outwardly projecting arms, the bottom ledges having vertical walls provided with perforations to receive the bracket-arms and thereby support the drip-pan.

3. In an oven having a vertical wall provided with a vertically swinging door

hinged at the bottom, links hinged to the
sides of the door and extending permanently
through said wall into the chamber of the
oven, and bent to operate freely through
5 said wall with an oscillation of the door in
either direction, and suitable devices on the
links positioned permanently outside the
oven to engage the outer face of the oven
wall for an open position of the door, and

thereby arrest further movement on the part 10
of the door.

In testimony whereof I affix my signa-
ture, in presence of two witnesses.

PETER J. McMORROW.

Witnesses:

EMIL STAREK,
T. EVANS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."