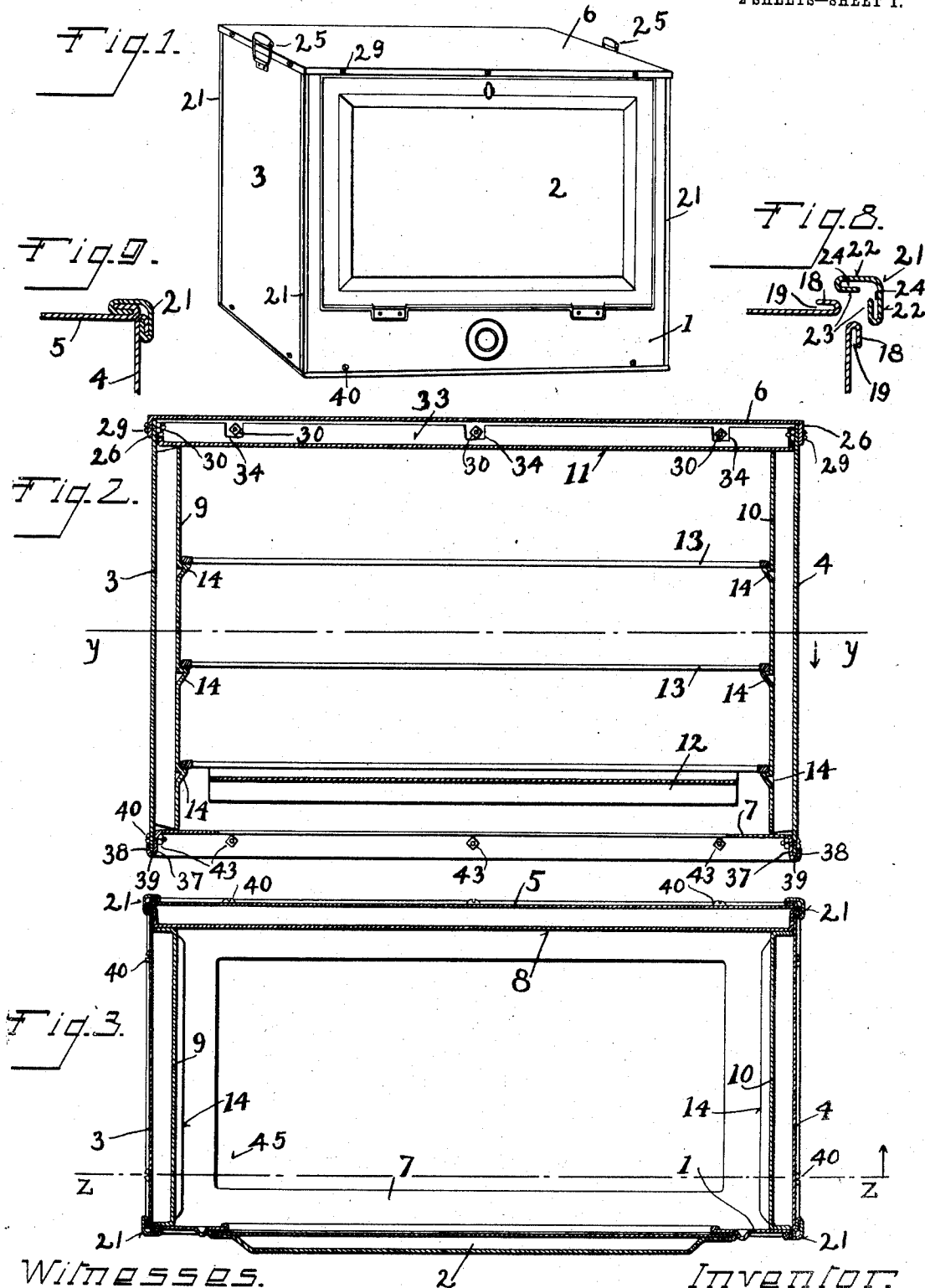


M. A. FLANNERY.
 KNOCKDOWN PORTABLE OVEN.
 APPLICATION FILED SEPT. 3, 1907.

964,855.

Patented July 19, 1910.

2 SHEETS—SHEET 1.



WITNESSES.
 Homer Bradford
 Florence Quinn.

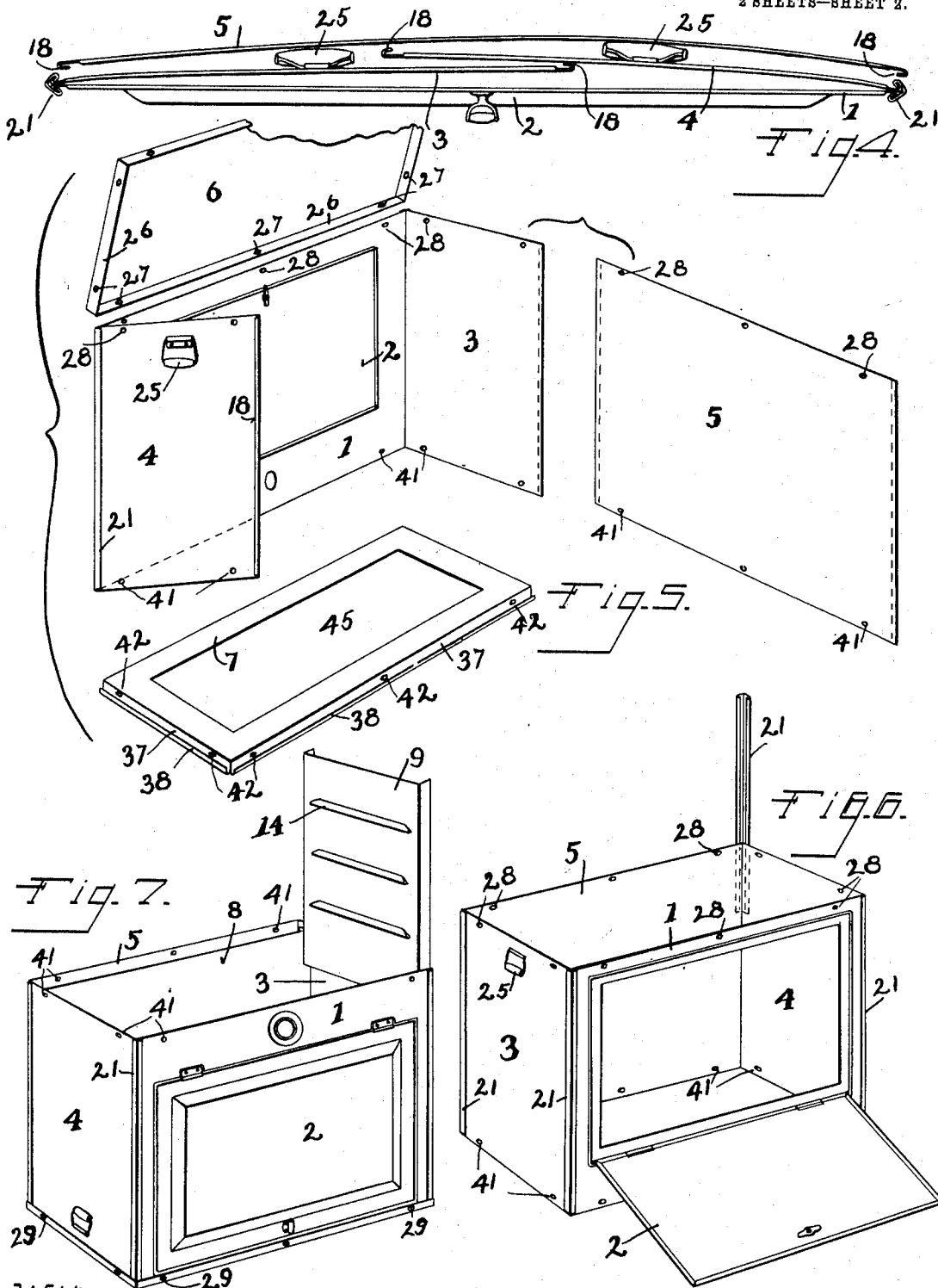
INVENTOR.
 Michael A. Flannery,
 by N. A. Heibel, His Attorney.

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 by R. H. Hulse, Attorney

UNITED STATES PATENT OFFICE.

MICHAEL A. FLANNERY, OF NEWPORT, KENTUCKY, ASSIGNOR TO THE E. H. HUENEFELD COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF OHIO.

KNOCKDOWN PORTABLE OVEN.

964,855.

Specification of Letters Patent. Patented July 19, 1910.

Application filed September 3, 1907. Serial No. 391,077.

To all whom it may concern:

Be it known that I, MICHAEL A. FLANNERY, a citizen of the United States, residing at Newport, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Knockdown Portable Ovens, of which the following is a specification.

My invention relates to portable ovens of the character employed in connection with gas, gasoline or other vapor stoves, and it is the object of my invention to provide a new and useful oven of this nature capable of being knocked down for convenience and economy in shipping and for other purposes, and the invention will be readily understood from the following description and claims, and from the drawings, in which latter:

Figure 1 represents a perspective view of my improved portable oven in set-up relation. Fig. 2 is a vertical longitudinal section of the same on a line corresponding to the line $z-z$ of Fig. 3. Fig. 3 is a horizontal section of the same, shown on a line corresponding to the line $y-y$ of Fig. 2, with the bottom deflector-plate removed. Fig. 4 shows the outside walls of the oven in knock-down relation. Fig. 5 shows the parts composing the outside casing of the oven in perspective and in separated relation. Fig. 6 is a perspective view, showing the outside casing of the oven in partly assembled relation, with the top and bottom omitted. Fig. 7 is a perspective view of the same in partly assembled relation, with the top in position, the bottom being omitted and the lining being in partly assembled relation. Fig. 8 is an enlarged detail in horizontal section showing the corner construction of the outer body of the oven in separated relation; and, Fig. 9 is a similar view of the same in assembled relation.

In its preferred form the oven comprises a side wall having the ends releasably hinged thereto, the end walls being adapted to be laid closely adjacent to said side wall when the oven is in knock-down relation, the other side wall being arranged to be releasably secured to the end walls for forming the outer walls of the body of the oven, the top and bottom being detachable. The lining is also arranged in releasable relation.

1 represents the side wall to which a door 2 is hinged, which may be termed the front.

3 4 represent the end walls.

5 is the other side wall, which may be termed the back.

6 is the top and 7 is the bottom.

8 is the back lining, and 9 10 are the end linings which coöperate therewith to form upright inside linings, and 11 is the inside top lining.

12 is the deflector-plate.

13 are shelves. The shelves and deflector-plate are supported on supports 14 formed in the end linings.

Each of the end walls and the side walls are at each of their lateral edges provided with a reversely-bent flange 18 slightly spaced from the body of the wall from which it is bent by the space 19.

21 are corner-pieces, shown as angle-strips. These angle-strips are formed with the relatively angled webs 22, the outer lateral edges of which are respectively inwardly and reversely-bent for forming the flanges 23, slightly spaced from the inside of the bodies of said webs by the spaces 24.

25 are handles secured to the end walls adjacent their tops.

In setting up the oven one of the angle-strips is intended for use at each corner of the oven, thereby forming corner-pieces, and in thus setting up the oven the flanges 23 of the corner-pieces are received by the spaces 19 at the lateral edges of the respective body walls of the oven. The flanges 18 at the respective lateral edges of the body walls are received by the spaces 24 of the corner-pieces. In this manner the corners are formed without exposed uncut edges. In practice, the corner-pieces at two of the corners (see Figs. 4 and 5) are placed in position at the factory so that in packing for shipment the ends walls may be laid substantially close to the side-walls while remaining releasably attached thereto for convenience and further thereby taking up little space. The construction of the parts together with the resiliency of the metal are such as to permit this to be done. When setting up the oven, these end walls, being thus attached to one of the side walls, are swung outwardly so as to be substantially at right angles to the sidewall which they are attached, and the other of the side walls placed adjacent to the free edges of the end walls preparatory to form-

ing the additional corners. The respective corner-strips for those corners are then slipped into place, this being accomplished preferably by slipping the corner-pieces 5 longitudinally, with the flanges and spaces respectively at the corners of the body walls and the corner-pieces mating. During this operation the body walls are preferably in upright position as shown in Fig. 6. The 10 top of the outer body is then put in place. This top is provided with depending flanges 26 which are received outside of the upper edges of the body of the oven and also preferably outside the upper ends of the corner-pieces. These flanges and the body ad- 15 jacent said upper edges are provided respectively with registering apertures 27 28, bolts 29 passing through said registering apertures and having nuts 30 for clamping the same in position. The oven-body as 20 far as set up is then reversed into upside-down position as shown in Fig. 7 and the top lining inserted in place. This top lining is provided with upwardly extending edge flanges 33 (see Fig. 2) which have 25 recesses 34 therein for accommodating the bolts 29. The back lining and end linings are thereupon inserted. (See Fig. 7.) The bottom is then put in position. This bot- 30 tom is formed up with depending flanges 37 terminating in upwardly extending reversely-bent flanges 38 forming channels 39 adapted to receive the lower ends of the body of the oven. Bolts 40 are received 35 through apertures 41 adjacent the lower edge of said body and apertures 42 in the flanges 38, the bolts being clamped in position by nuts 43. The lower ends of the corner-pieces are also received within the 40 reversely-bent flanges 38. This forms a very secure releasable reinforced bottom edge for the assembled oven upon which it is supported. This bottom is provided with an opening 45 through which the flame 45 is received against the deflector-plate 12. The deflector-plate and shelves may be inserted through the door opening after the oven has been set up.

My invention presents an oven which is 50 capable of being collapsed and shipped and stored in knock-down form, taking up little space, and provides an oven which is conveniently set up and when set up has the appearance of an oven made with perma- 55 nent seams. It is further strong and compact and of rigid structure.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent is:

60 1. In a knock-down portable oven, the combination of collapsible walls, and a top and bottom, the said bottom being provided

with depending flanges received inside said walls and upwardly extending flanges re- 65 ceived outside said walls, said top provided with downwardly extending flanges received outside said walls, bolts for securing said top in place, upright inside linings received within and supported by said walls, and an inside top lining supported by said upright 70 inside linings and provided with upwardly extending flanges, substantially as described.

2. In a knock-down portable oven, the combination of collapsible walls, and a top and bottom, the said bottom being provided 75 with depending flanges received inside said walls and upwardly extending flanges received outside said walls, said top provided with downwardly extending flanges received outside said walls, bolts for securing said top 80 in place, upright inside linings received within and supported by said walls, and an inside top lining supported by said upright inside linings and provided with upwardly extending flanges having recesses therein for 85 accommodating said bolts, substantially as described.

3. In a knock-down portable oven, the combination of collapsible walls, and a top and bottom, the said walls comprising end 90 walls and side walls, each of the lateral edges of said walls being provided with a reversely bent flange slightly spaced from the body of the wall from which it is bent, releasable corner-pieces which are of right 95 angular form in cross-section, each of the lateral edges of said corner-pieces being provided with a reversely bent flange slightly spaced from the body of the corner-piece from which it is bent, said corner- 100 pieces being slidable lengthwise of the said walls and the flanges thereof received under the flanges at the lateral edges of said walls of said oven for forming the corners of said oven, the said bottom being provided with 105 depending flanges received inside said walls and upwardly extending flanges received outside said walls, said top provided with downwardly extending flanges received outside said walls, releasable bolts for releas- 110 ably securing said top to said walls, upright inside linings received within and supported by said walls, and an inside top lining supported by said upright inside linings and provided with upwardly extending flanges 115 having recesses therein for accommodating said bolts, substantially as described.

In testimony whereof, I have subscribed my name hereto in the presence of two sub- scribing witnesses.

MICHAEL A. FLANNERY.

Witnesses:

EARLE R. PASSEL,
FLORENCE QUINN.