Nov. 6, 1923. 1,472,836

R. HOFFMAN

PORTABLE OVEN

Filed March 26, 1920 2 Sheets-Sheet 1

Fig. 1.

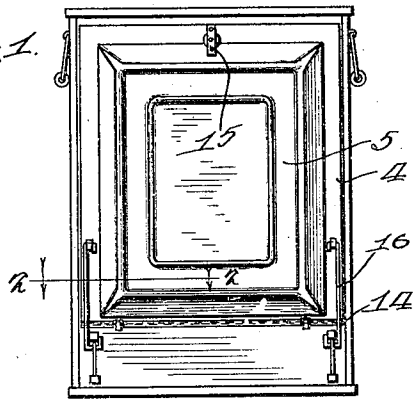


Fig. 3.

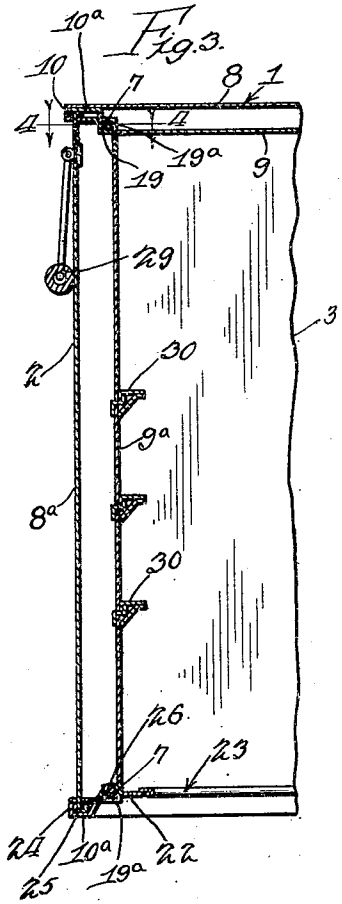


Fig. 2.

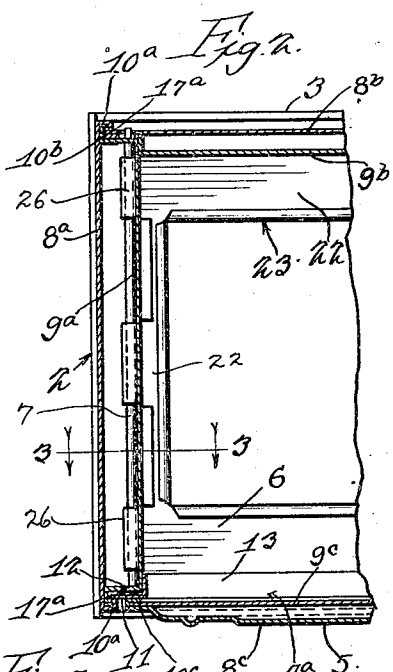
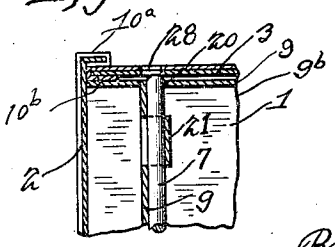


Fig. 4



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Filed March 26, 1920 2 Sheets-Sheet 2

Fig. 5.

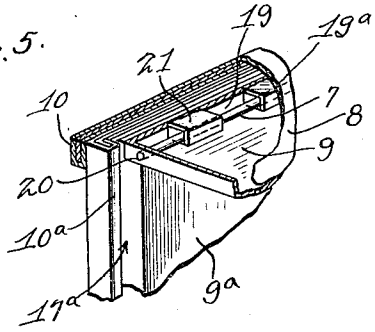


Fig 6

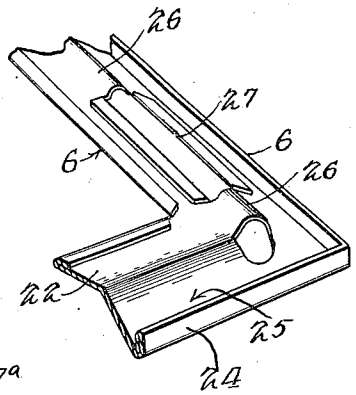


Fig. 7.

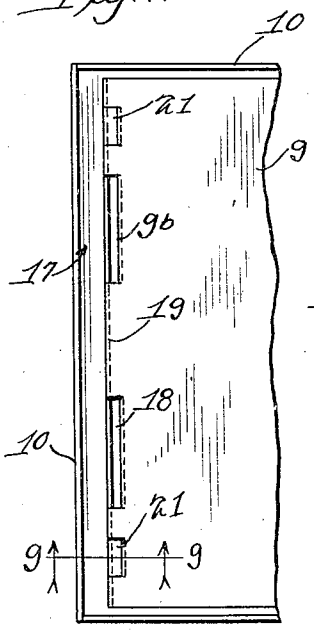


Fig 8.

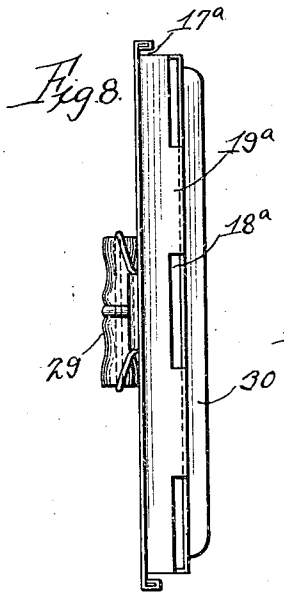
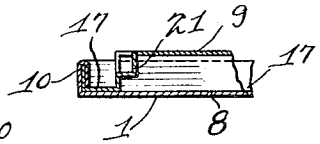


Fig 9



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Patented Nov. 6, 1923. 1,472,836

UNITED STATES PATENT OFFICE.

RUDOLPH HOFFMAN, OF KANKAKEE, ILLINOIS, ASSIGNOR TO SEARS, ROEBUCK AND CO., OF CHICAGO, ILLINOIS, A CORPORATION OF NEW YORK.

PORTABLE OVEN.

Application filed March 26, 1920. Serial No. 368,883.

To all whom it may concern:

Be it known that I, RUDOLPH HOFFMAN, a citizen of the United States, residing at Kankakee, in the county of Kankakee and State of Illinois, have invented certain new and useful Improvements in Portable Ovens, of which the following is a specification.

The invention relates to ovens of the type employed in conjunction with gas or oil heating stoves, being adapted to be placed over the stove burners upon the grate, and removed at will for storage in a convenient place.

The invention relates more particularly to ovens of the knockdown type, and has for its aim the provision of an oven of extreme simplicity which is capable of being readily assembled by the ordinary consumer or purchaser, thus enabling the oven to be shipped in its disassembled form crated in a compact manner so as to consume a minimum amount of space and avoid injury in shipment.

The object of the invention thus generally stated, together with other and ancillary advantages, is attained by the construction and arrangement illustrated in the accompanying drawings forming part hereof, in which Figure 1 is a front elevation of an oven constructed in accordance with my invention. Fig. 2 is a fragmentary horizontal sectional view taken on an enlarged scale substantially on the line 2—2 of Fig. 1. Fig. 3 is a fragmentary vertical sectional view taken on line 3—3 of Fig. 2. Fig. 4 is a fragmentary sectional view taken in the plane of line 4—4 of Fig. 3 and showing on an enlarged scale details of construction. Fig. 5 is a perspective view of an upper corner of the oven with parts broken away to show details of construction. Fig. 6 is a perspective view of a portion of the frame forming the bottom of the oven. Fig. 7 is an underside plan view of one end of the top wall of the oven. Fig. 8 is an end elevation of one of the side walls of the oven. Fig. 9 is a fragmentary sectional view taken on line 9—9 of Fig. 7.

The structure comprises generally a top wall 1, side walls 2, a rear end wall 3, and a front end wall 4, the latter wall having a door 5 therein. 6 designates the open bottom wall or frame. The several walls are shaped at their adjoining edges so as to interengage, being provided for this purpose with interfitting portions adapted to be locked in operative relationship by means of locking rods 7, of which there are four in number. The oven is assembled by first placing in position upon a table or the like, the top wall 1 and then associating with said wall first the side walls 2, which are arranged to interengage with the wall 1 and be connected therewith by means of two of the rods 7. The rear wall 3 and front wall 4 are then placed in interfitting association with the end walls and top wall; and finally the bottom wall or frame is placed and locked in position by means of a pair of the rods 7, the frame when thus locked in position being adapted to retain the several walls in operative relation.

Each of the walls with the exception of the bottom frame 6 is made double to provide an insulating air space. Thus the top wall 1 (Fig. 3) is formed by an outer sheet 8 and an inner sheet 9 spaced therefrom, and at the four edges of the wall the sheet 9 is bent inwardly into engagement with the sheet 8 and clamped in position thereon by a bent over flange 10 on each edge of the sheet 8. Similarly, the end walls 2 are each formed by an outer sheet 8^a and an inner sheet 9^a secured at the four edges of the wall by a bent over flange 10^a; while the rear wall 3 (Fig. 2) is formed by an outer sheet 8^b and an inner sheet 9^b secured at their edges by bent over flanges 10^b. The front wall 4 consists of a plate 11 having bent over edges 12 for stiffening purposes and a central opening 4^a defined by a flange 13, which opening is arranged to be closed by the door 5. The latter is hinged in a suitable manner as at 14 upon the plate 11 at the lower edge of the opening 4^a, and said door is made of double wall construction as shown in Fig. 2 to provide an insulating air space. The door thus comprises an outer sheet 8^c and an inner sheet 9^c secured at their edges by an inturned flange 10^c formed on the outer sheet 8^c. A turn button 15 is provided at the upper edge of the door

which is adapted to engage with the flange 13 at the upper edge of the opening in the front wall to hold the door closed.

Suitable means, such as devices 16, may be provided to support the door in a horizontal position when open.

At their adjoining edges the several walls are constructed so as to interengage for the purpose of being locked together by the rods 7. Thus the top wall is shaped to provide a channel 17 at each edge thereof which is formed by properly shaping the inner sheet 9 and the inturned flange 10; and to lock these walls in operative relation the inner sheets 9 and 9[a] of the respective walls are apertured as at 18 and 18[a] to provide interfitting loop portions 19 and 19[a] adapted to receive a rod 7 so that the walls are held thereby in operative relation. To permit of the insertion of the rod 7, the sheet 9 at the forward and rear corners thereof is apertured as at 20 (Figs. 4 and 5); and to serve as guides for the ends of the rods when inserted through such apertures, the sheet 9 is bent inwardly near the opposite edges thereof to form straps 21 (Figs. 7 and 9). Said straps, it will be noted, are in alinement with the loop portions 19 of the top wall.

With the side walls 2 secured in position with reference to the top wall 1, the rear wall 3 is next placed in operative relation to said walls. Said wall has its opposite edges made flat as shown at 10[b] (Fig. 2), and to receive such edges the top wall 1 and end walls 2 have their flanges 10 and 10[a] respectively bent upwardly to form therebetween and the adjacent bent portions of the sheets 9 and 9[a] channels 17 and 17[a] (Figs. 2, 8 and 9). The rear wall thus engages at its top and side edges in the channels 17 and 17[a] of the end and top walls respectively. Similarly, the front wall 4 has its side and top edges 12 engaging in channels 17 and 17[a] of the side and top walls, respectively.

The bottom wall or frame 6 (Figs. 3 and 6) is made from a single sheet of material having a raised central portion 22 provided with an opening 23; and at the opposite edges of the wall are formed upright flanges 24 which together with the raised portion 22 form a channel 25 at each edge of the frame to receive the lower edges of the end walls 2, the rear wall 3 and the front wall 4. Adjacent the opposite side edges of said frame, the raised portion 22 is struck up to form looped portions 26, and is provided with openings 27 to receive the loop portions 19[a] (Fig. 3) at the lower edges of the side walls 2, the openings 18[a] in the sheet 9[a] of the end walls being adapted to receive said looped portions 26, and said interfitting portions together forming elongated apertures for receiving the rods 7.

In assembling the oven, it will be seen that the side walls 2 may first be brought into operative association with the top wall 1 and locked by means of a pair of rods 7 entered through the elongated apertures formed by the interfitting portions 19 and 19[a] of said walls. Thereupon, the rear wall 3 and the front wall 4 are placed in position with their opposite edges engaging in the channels provided by the top and end walls. Finally, the bottom frame is placed in position over the bottom edges of the end, rear and front walls, with the strap portions 19[a] and loop portions 26 forming elongated apertures to receive the rods 7 at the opposite end edges of the frame, whereby to lock the parts together. To permit of the insertion of the last mentioned rods 7, the rear wall 3 is provided with apertures 28 (Fig. 4); and to prevent the rods 7 from accidental removal said apertures are preferably slightly offset as shown in said figure. Preferably also, the pair of apertures are provided at the upper as well as the lower corners in the rear wall in order that this wall may be used with either end up.

Suitable handles 29 may be provided upon the end walls 2, and upon their inner sides the walls may be provided with the usual supports 30 for the oven shelves (not shown).

It will be seen that I have provided an oven of the knockdown type which may be cheaply constructed and which may be readily assembled by a purchaser or user to whom it has been shipped in its knockdown form. Moreover, when set up, the oven parts are readily held together and cannot become accidentally disassociated.

I claim as my invention:

1. A device of the character described comprising, in combination, top, bottom, side and end walls having their adjacent edges shaped to provide interfitting portions wholly within the oven forming elongated apertures, and means for interlocking said walls in operative association comprising rods removably inserted in said elongated apertures.

2. A device of the character described comprising, in combination, top, bottom, side and end walls arranged to be operatively associated and secured together into a rigid whole, certain of said walls being shaped to provide channels adapted to receive the edges of the other walls, and means for locking said walls together comprising a plurality of rods, said walls having at their adjoining edges interfitting portions forming elongated apertures to receive said rods.

3. A device of the character described having hollow walls constructed from an inner and an outer sheet of metal spaced apart with their edges secured together, and means for securing said walls together comprising interfitting portions provided by the inner

sheets of the adjoining walls and together forming elongated apertures, and locking pins entered into said apertures.

4. A device of the character described having walls constructed from two sheets of metal spaced apart to form insulating air spaces but secured together at their edges, said walls being shaped at certain edges to form channels adapted to receive the edges of adjoining walls, the inner sheets of the adjoining walls being constructed to provide interfitting strap portions forming elongated apertures, and locking devices adapted to be inserted into said apertures to secure the walls together.

5. An oven comprising, in combination, adjoining walls, each comprising an outer wall member and an inner wall member spaced apart to provide an insulating air space, the inner wall members of the adjoining walls being adapted to interengage within the oven, and locking members arranged to coact with the interengaging wall members to hold them in operative association.

6. An oven comprising, in combination, adjoining walls, each comprising an outer wall member and an inner wall member spaced apart to provide an insulating air space, the inner wall members of the adjoining walls being adapted to interengage, and locking pins arranged to coact with the interengaging wall members to hold them in operative association, the outer wall members being shaped to form with the inner wall members channels for receiving the edges of the outer wall members of the adjoining walls.

7. An oven comprising, in combination, a top wall having channels formed upon its inner side at each side edge thereof, side and end walls having edges adapted to engage in said channels, a bottom wall also having at its several edges and upon its inner side channels for receiving the edges of the side and end walls, the adjoining walls having portions adapted to coact to form elongated apertures, and locking pins entered in said apertures to secure their parts together into a rigid whole.

8. An oven of the class described having hollow walls comprising inner and outer sheets spaced apart to provide insulating air spaces, one of said walls having a channel adapted to receive the edge of the other wall and the inner sheets of both of said walls having interengaging portions, and a locking pin adapted to coact with said portions of the adjoining walls to lock the parts together.

9. An oven of the class described comprising, top, bottom, side and end walls adapted to be secured together in operative relation, means for locking the side and end walls to the top wall including interengaging portions upon the inner side and top walls forming elongated apertures, and locking pins adapted to coact with said portions; and means for securing the bottom wall to said side and end walls, also comprising interengaging portions upon the bottom and inner side walls forming elongated apertures, and locking pins adapted to coact with said portions.

10. An oven of the class described comprising, top, bottom, side and end walls adapted to be secured together in operative relation, means for locking the side and end walls to the top wall including interengaging portions upon the side and top walls, and locking pins adapted to coact with said portions; and means for securing the bottom wall to said side and end walls, also comprising interengaging portions upon the bottom and side walls, and locking pins adapted to coact with said portions, one of said end walls having apertures therein for receiving said locking pins.

11. An oven of the class described comprising, top, bottom, side and end walls adapted to be secured together in operative relation, means for locking the side and end walls to the top wall including interengaging portions upon the side and top walls, and locking pins adapted to coact with said portions; and means for securing the bottom wall to said side and end walls, also comprising interengaging portions upon the bottom and side walls, and locking pins adapted to coact with said portions, one of said end walls having apertures therein for receiving said locking pins and said apertures being offset with relation to said pins to prevent the accidental displacement of the pins.

12. An oven comprising, in combination, hollow top, side and end walls arranged to be secured together in operative relation, and a bottom wall in the form of a sheet metal frame shaped to provide channels and loops adjacent the channels, the lower edges of the side walls having portions adapted to coact with said loops to form elongated apertures, and locking pins entered into said apertures.

13. In a device of the class described, the combination of two walls, one shaped at its edge to provide a channel adapted to receive the edge of the other wall, and securing means comprising loops on the respective portions adapted to register when the walls are assembled, and means such as a wire rod for insertion into the registering loops to lock the walls together.

14. In an oven of the character described, comprising a bottom and hollow top, side and end walls arranged to be secured together in operative relation, interfitting ears on the inner walls of the sections, provided with apertures which when the sections are

interfitted form continuous elongated apertures, locking pins for engagement in said apertures to fasten the sections together and apertures in the outer walls of the sections to permit insertion of said locking pins into said first mentioned apertures, said apertures being offset relatively to said first mentioned apertures whereby to prevent accidental displacement of the locking pins.

15. In a device of the class described, the combination of two walls and securing means for the walls comprising loops on the inner sides of the walls arranged to register in assembling the walls, together with means adapted for insertion into the registering loops to hold the walls together.

In testimony whereof, I have hereunto set my hand.

RUDOLPH HOFFMAN.