A. C. MOTT, JR., AND A. J. MEYER.

GAS RANGE.

APPLICATION FILED JULY 1, 1919.

1,390,809. Patented Sept. 13, 1921.

2 SHEETS—SHEET 1.

Fig. 2.

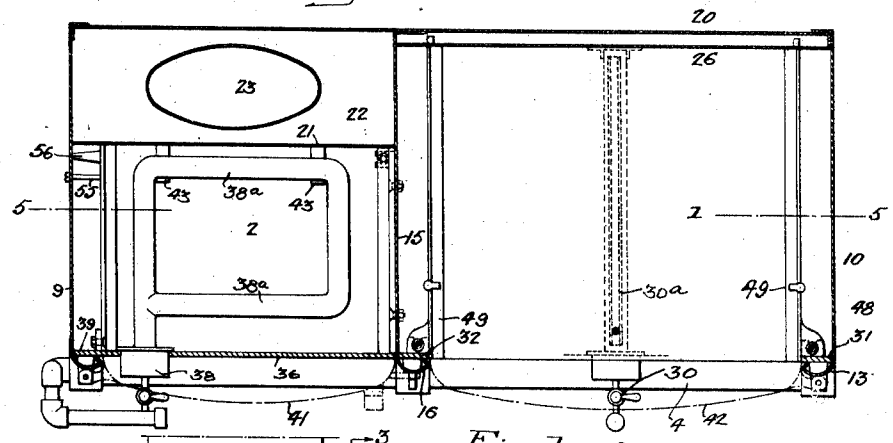


Fig. 1.

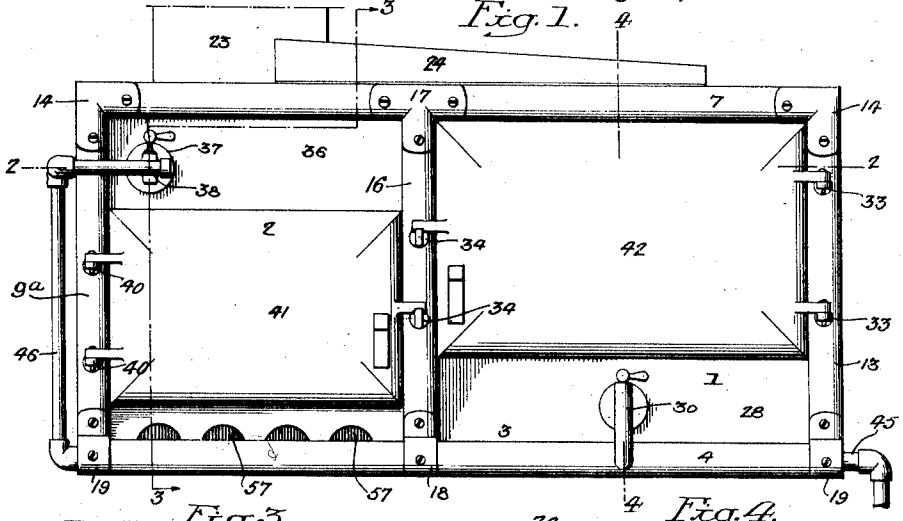


Fig. 3.

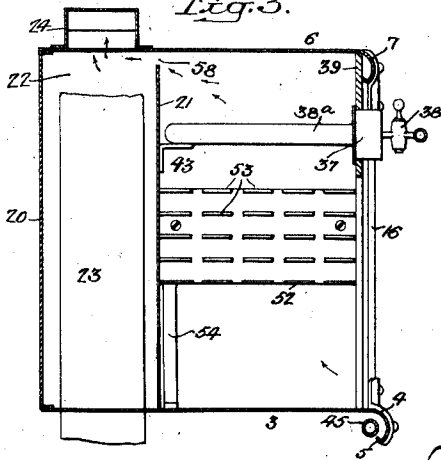
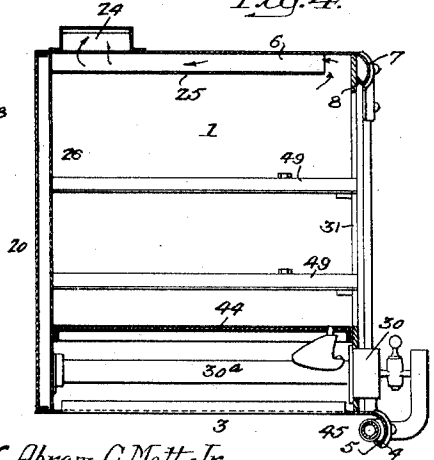


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 5

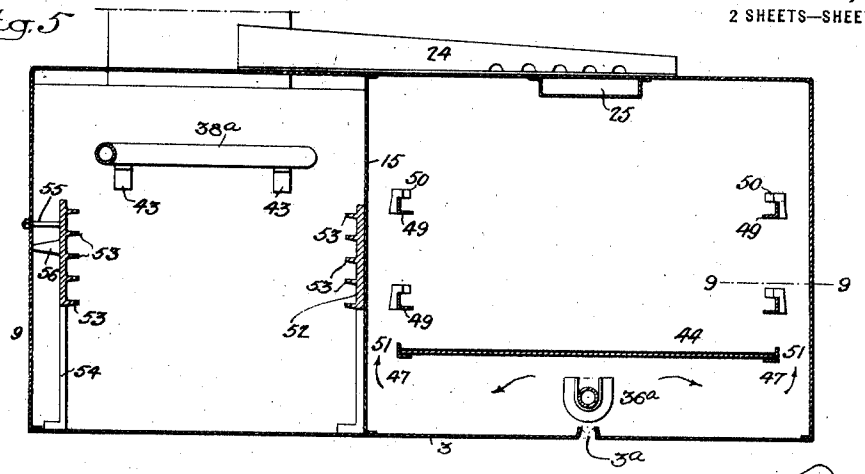


Fig. 9.

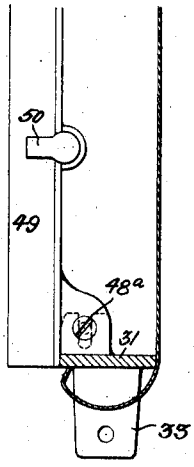


Fig. 10.

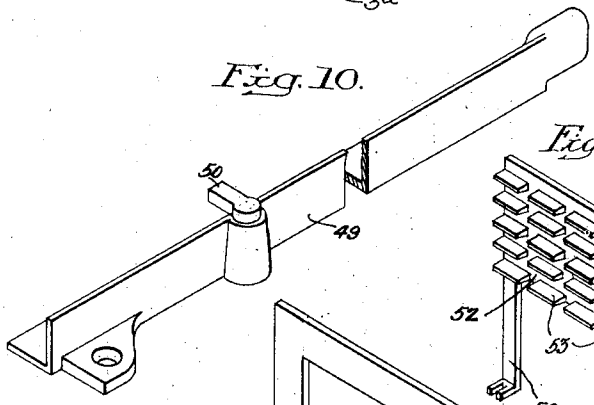


Fig. 8.

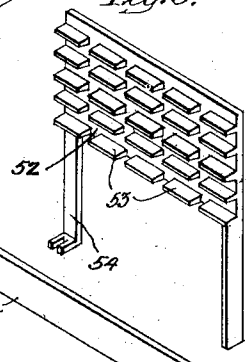


Fig. 6.

Fig. 11.

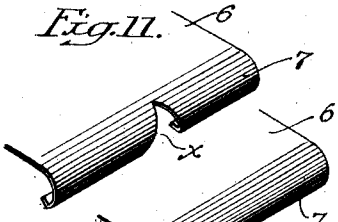
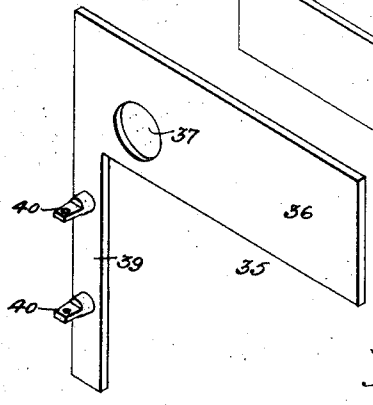


Fig. 12.

Fig. 7.



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UNITED STATES PATENT OFFICE.

ABRAM C. MOTT, JR., AND ALBERT J. MEYER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO ABRAM COX STOVE COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

GAS-RANGE.

1,390,809. Specification of Letters Patent. Patented Sept. 13, 1921.

Application filed July 1, 1919. Serial No. 307,980.

To all whom it may concern:

Be it known that we, ABRAM C. MOTT, Junior, and ALBERT J. MEYER, citizens of the United States, and residents of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented certain Improvements in Gas-Ranges, of which the following is a specification.

One object of our invention is to construct an oven section, including an oven and a broiler compartment, so as to dispense with the heavy cast iron braces usually employed and to utilize the shaped sheet iron as a brace.

A further object of the invention is to improve other details in the construction of the oven, whereby a very substantial structure is made at a comparatively low cost.

In the accompanying drawings:

Figure 1 is a front view in elevation of the oven and broiler sections of a gas range, the base section of the range being omitted, as it forms no part of our invention;

Fig. 2 is a sectional plan view on the line 2—2, Fig. 1;

Fig. 3 is a sectional view on the line 3—3, Fig. 1;

Fig. 4 is a sectional view on the line 4—4, Fig. 1;

Fig. 5 is a sectional view on the line 5—5, Fig. 2;

Fig. 6 is a perspective view of the cast metal oven section plate;

Fig. 7 is a perspective view of the cast metal broiler section plate;

Fig. 8 is a perspective view of the cast metal slide supporting plate;

Fig. 9 is an enlarged plan view on the line 9—9, Fig. 5, showing one of the oven slide supports;

Fig. 10 is a detached perspective view of one of the slide supports; and

Figs. 11 and 12 are views illustrating the method of bending the top plate at the corners.

1 is the oven section. 2 is the broiler section of the overhead portion of a gas range in the present instance. This portion is usually supported on brackets a sufficient distance above the main body of the gas range, or the combined gas and coal range, so as not to interfere with the cooking utensils on the main portion of the range. 3 is the bottom plate having a rolled rim 4 at its outer end. This bottom plate extends the full width of the range and the full depth of the oven portion. By making the bottom plate 3 of sheet metal and forming a deep rolled rim 4 at the outer edge, which has a bent up portion 5, we can dispense with the usual cast iron brace generally employed to support the overhead structure, as the iron is stiff enough to support the bottom plate properly and the structure carried thereby.

6 is the top plate of the structure having a rolled rim 7 with a turned up edge 8. This rim acts as a support and stiffens the top plate. The two rims also give an ornamental rounded appearance to the structure, as clearly shown in Fig. 1.

9 is one of the side plates having a rolled rim 9^a at the forward end. 10 is the opposite side plate having a rolled rim 13. In the present instance, the top plate 6 and the side plates 9 and 10 are made in one piece and the rim is cut at x, in the form of a V and the plate is bent at right angles, after which the cap plates 14 are secured in position to cover the joint and also to reinforce the same. 15 is a transverse division plate having a rolled rim 16 at its outer edge, which is shaped at top and bottom to fit the rims 7 and 4. Plates 17 and 18 cover the joints.

19, 19 are cover plates for the joints between the side plates and the bottom plates. By forming the side plates integral with the top and providing the heavy rolled rim, we are enabled to stiffen the structure, while using comparatively light material.

20 is the back plate, which is preferably flanged at top and bottom and may be spot welded to the top and bottom plates or riveted thereto, as desired. It will be noticed that the broiler section is not so deep as the oven section and is separated by a partition 21 from a compartment 22 through which passes the flue 23 for the products of combustion of the coal of the range, when a coal section is used. Connecting the flue 23 with the upper portion of the oven 1 is a flue, or duct, 24 to carry the odors from the oven to the main flue. In the upper portion of the oven is a duct 25 extending the full depth of the oven and terminating at the forward end thereof and open at the forward end so that any gases, or fumes, in the

oven will pass to the forward portion of the oven and then through the duct 25 to the flue 24. At the back of the oven is an inner oven plate 26 forming an air chamber between the oven and the back 20 of the structure.

Located in the front of the oven is a light cast iron plate 27, shaped as shown in Fig. 6, having transverse portions 28, 28ª. The portion 28 is perforated at 29 for the passage of the oven burner 30 and has side members 32, which extend back of the rolled rims 13 and 16. These are the vertical stiffening members of the structure and also are the supports for the hinge projections 33 and the keeper projections 34. These projections are cylindrical and pass through correspondingly cylindrical holes in the rim, making a neat finish.

35 is a plate located at the broiler section and having a portion 36 extending over the upper portion of the broiler section and having an opening 37 for the burner 38. 39 is an extension, which is back of the rolled rim 9ª and has hinge projections 40 which extend through openings in the rim. 41 is the door of the broiler section and 42 is the door of the oven section. The portion 38ª of the burner, which is located above the broiler section, is shaped, in the present instance, as shown in Fig. 2, and is supported at the rear by brackets 43 and by the front plate 36, while the burner tube 30 is located under the bottom plate 44 of the oven section and is supported by the front plate 28 and by a socket on the back plate. The supply pipe 45 extends back of the lower rim 4 and is coupled to the burner 30 of the oven and is connected by a vertical pipe 46 with the burner 38 of the broiler. The oven bottom plate 44 is supported on angle bars 47, preferably of cast metal. These bars have lugs which rest upon lugs on the plates 31 and are secured to said plates by bolts 48. In the oven are angle slideways 49 made of cast metal and of the shape shown in Fig. 10. There are lugs on the plate 31 secured thereto by bolts 48ª. Cast integral with these bars is a projection 50, which prevents the tipping of the oven slides when they are moved out.

In the bottom plate 3 is a slot 3ª extending substantially the full depth of the burner 30. This slot admits air to the chamber in which the burner is located. The bottom plate is cut and the portions bent up so as to form a tapered nozzle, as shown, and this construction also stiffens the bottom plate 3.

It will be noticed that the bottom plate 44 of the oven is discontinued at each side so as to form passages 51 for the products of combustion, as it will be understood that the gas burner 30ª is located below the solid oven plate 44, Fig. 5, and the products of combustion escape through the passages 51 into the main body of the oven and escape through the duct 25 to the flue 24, and thence to the chimney.

In the broiler section are cast metal slide supporting plates 52 having a series of ribs 53 forming ways for the broiler slides. These plates are supported by legs 54 and are secured to the plates 9 and 16 by bolts 55. The plate at the side of the oven structure is spaced a distance from the end plate 9 of the oven and spacing lugs 56 are formed on the slide supporting plate so as to hold it in proper relation to the door opening. The other plate has a portion which makes a finish at the open side of the broiler structure.

In the bottom of the broiler structure is a series of openings 57, which admit air to the broiler section and the rear partition of the broiler stops short of the top plate 6 forming a passage 58 so that the gases may escape into the flue chamber 22 and to the flue 24.

By the above construction, it will be seen that the only cast metal parts used in this portion of the gas range are two frames for the front of the structure on which the doors are hung and the slideways. The bracing is accomplished by the heavy rolled rims of the sheet metal plates.

We claim:

1. The combination in an overhead structure for gas ranges, of a frame consisting of bottom, top, and end plates, all having heavy rolled rims at the front and forming braces to stiffen the structure; and a central division plate of sheet metal, also having a heavy rolled rim at the front; and two cast metal plates, one plate forming part of the front of the oven structure and the other forming part of the front of the broiler structure, the said plates being located back of the vertical rims and having projections extending through the perforations in the rims; and doors hung on the projections.

2. The combination in an overhead structure for gas ranges, of a frame consisting of top, bottom and side plates having rolled rims at the front and having reinforcing cover plates at the corners; a partition plate having a rolled rim; two cast metal plates, one cast metal plate forming the bottom portion of the front of the oven section and having vertical extensions back of the rims, the projections on these extensions passing through openings in the rim; a door hung on the projections; an L-shaped cast metal plate forming the top portion of the broiler section and having a depending extension back of one of the rims; and a door for closing the broiler section hung on the projections.

3. The combination in an overhead structure for gas ranges, of a sheet metal bottom plate having a rolled rim at the front form-

ing a brace, and side sections, each having a rolled rim at the front; a partition section, also having a rolled rim at the front, and dividing the broiler section from the oven section; two cast metal plates, one forming the lower portion of the oven section and the other forming part of the front of the broiler section; an opening in each plate; a burner extending through the opening; doors hung on the projections on the plates, one door closing the oven section and the other door closing the broiler section; a cast metal slide supporting the plates at each side of the broiler section; and guides for the sides located in the oven section.

4. The combination in an overhead structure for gas ranges, of sheet metal plates having rims forming braces; a cast metal front plate located back of the rims and having projections extending through the rims; a door hung on the projections; a series of cast supporting bars attached to the cast metal front plates; and a bottom plate supported on the lower pair of bars, the other bars being arranged to support the oven slides.

5. The combination in an overhead structure for gas ranges, of sheet metal plates having rims forming braces; a cast metal front plate located back of the rims and having projections extending through the rims; a door hung on the projections; a series of cast supporting bars attached to the cast metal front plate; a bottom plate arranged to support the oven slides; a gas burner extending through an opening in the cast metal plate and under the bottom plate; passages for the products of combustion on each side of the bottom plate; and a flue at the top of the oven for carrying off the products of combustion.

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