

Jan. 20, 1953

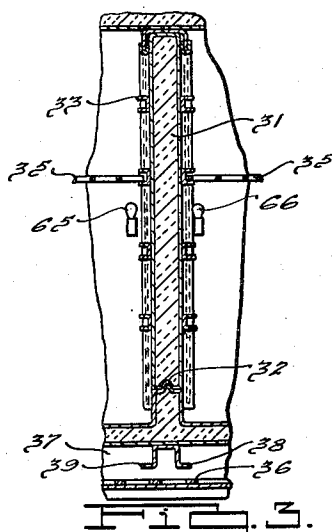
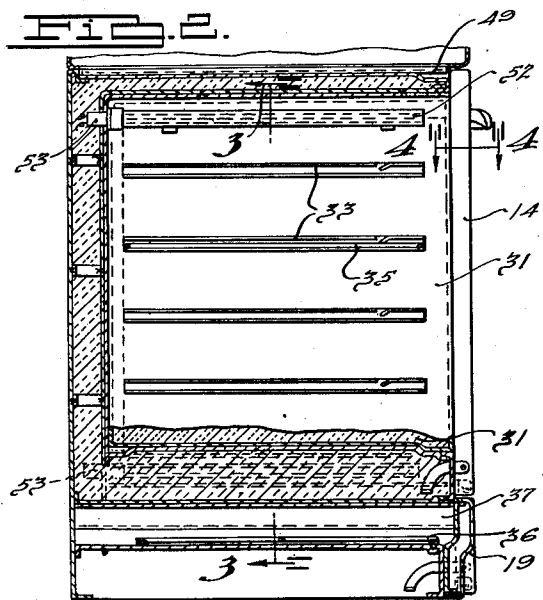
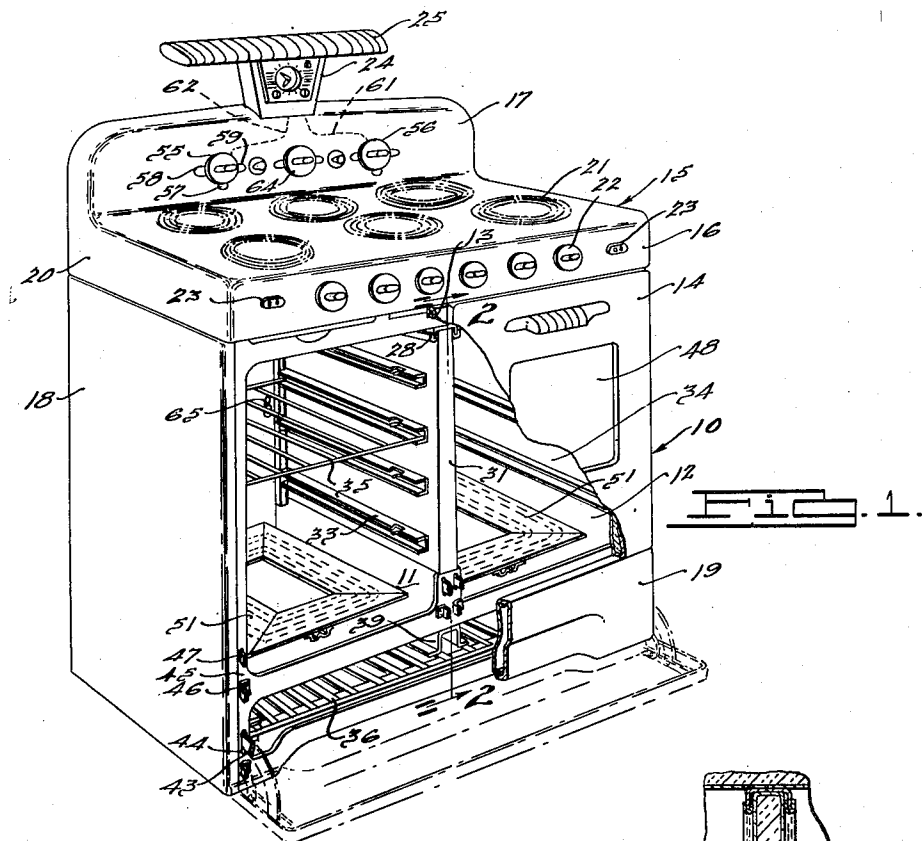
B. C. GOULD

2,625,928

STOVE OVEN WITH REMOVABLE PARTITIONS

Filed Jan. 7, 1948

2 SHEETS—SHEET 1



INVENTOR.

Byron C. Gould.

BY

Klanness, Dickey & Pierre
ATTORNEYS.

Jan. 20, 1953

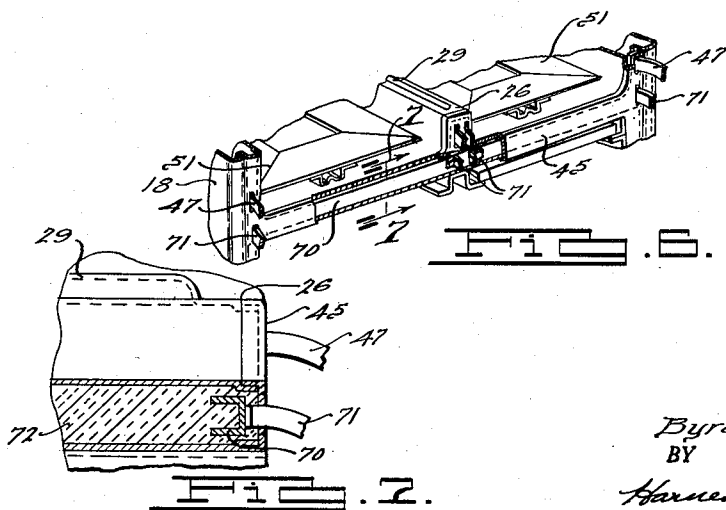
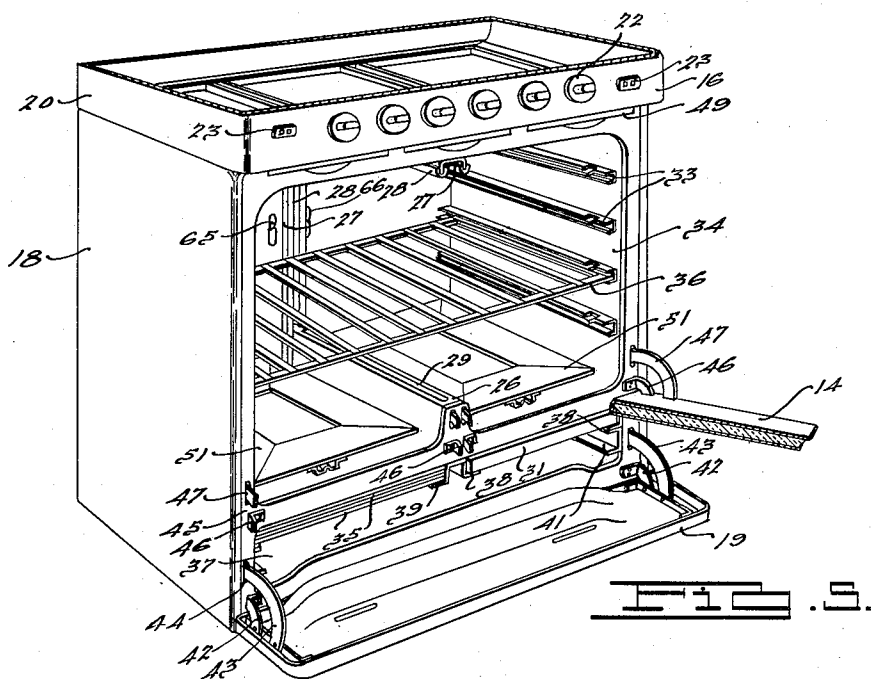
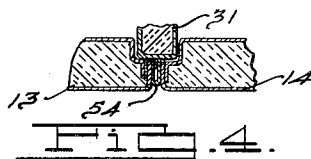
B. C. GOULD

2,625,928

STOVE OVEN WITH REMOVABLE PARTITIONS

Filed Jan. 7, 1948

2 SHEETS—SHEET 2



INVENTOR.

Byron C. Gould.

BY

Harness, Dickey & Pierce

ATTORNEYS.

UNITED STATES PATENT OFFICE

2,625,928

STOVE OVEN WITH REMOVABLE PARTITIONS

Byron C. Gould, Detroit, Mich., assignor to The Murray Corporation of America, Detroit, Mich., a corporation of Delaware

Application January 7, 1948, Serial No. 883

2 Claims. (Cl. 126—19)

1

This invention relates to cook stoves, and particularly to a cook stove having increased cooking capacity including a plurality of adjacent ovens having one or more removable partitions for enlarging the oven area.

The present invention pertains to the use of the entire space within the stove cabinet for an oven area which may be divided by one or more removable partitions into smaller oven compartments for ordinary use. Doors are provided which enclose each of the compartments, having sealing means therebetween for sealing the gap between the doors when the partition aligned therewith is removed.

While stoves of the electric, gas, coal or oil type may be constructed in accordance with the present invention, for the purpose of illustration an electric range is shown having the base cabinet provided with two oven compartments having a removable partition therebetween. The openings of the compartment are enclosed by doors disposed in aligned sealed relation. Below the ovens a storage compartment is provided for the two different types of racks employed with the ovens. Long racks are employed to span the interior of the oven compartments when the central partition is removed and short racks are utilized to span each of the two compartments when the central partition is in place. A panel on the lower front portion of the cabinet is hinged thereto to enclose the compartment in which the rack and the central partition are stored when not in use.

Like heating systems are employed for each of the oven compartments, the thermostatic elements of which are selected to operate under like heating conditions and are mounted in each of the oven compartments adjacent to the removable partition so that both will be subjected to the same heat for controlling the energization and de-energization of the respective oven heating elements when the partition is removed. A cooking top rests upon the cabinet and is provided with a plurality of electric cooking units, herein illustrated as six in number, to increase the top cooking capacity over the normal four burner arrangement now employed in the art.

Accordingly, the main objects of the invention are: to provide a stove having two adjacent oven compartments separated by a removable partition to form one large oven compartment; to provide rack supporting elements in adjacent oven compartments and on a removable partition therebetween and a rack storage compartment below the oven in rear of a hinged panel for storing one set of racks when the others are in use; to pro-

2

vide like heating elements for adjacent oven compartments having the removable partition therebetween, which are controlled by like thermostatic elements disposed adjacent to the partition in position to operate simultaneously when the partition is removed; and, in general, to provide a stove for cooking purposes having increased oven and top cooking capacity which is capable of operating efficiently on a portion of the oven and top burner capacity.

Other objects and features of novelty of the invention will be specifically pointed out or will become apparent when referring, for a better understanding of the invention, to the following description taken in conjunction with the accompanying drawings, wherein:

Figure 1 is a perspective view, with parts in section, of a stove of the cooking type embodying features of this invention;

Fig. 2 is a sectional view of the stove illustrated in Fig. 1, taken on the line 2—2 thereof;

Fig. 3 is a sectional view of the structure illustrated in Fig. 2, taken on the line 3—3 thereof;

Fig. 4 is a sectional view of the structure illustrated in Fig. 2, taken on the line 4—4 thereof;

Fig. 5 is a perspective view of the stove illustrated in Fig. 1, with the central partition removed;

Fig. 6 is a broken view of structure, similar to that illustrated in Fig. 1, showing a modified form thereof, and

Fig. 7 is a sectional view of the structure illustrated in Fig. 6, taken on the line 7—7 thereof.

Referring to Figs. 1 to 5, a cooking stove is illustrated comprising a base cabinet 10 having a pair of oven compartments 11 and 12 closed by doors 13 and 14, respectively. The base cabinet supports a cooking top 15 having a downwardly extending front flange 16 which projects outwardly from the face of the cabinet 10 to be flush with the face of the doors 13 and 14. The cooking top has a splash back 17 extending upwardly at the rear and flanges 20 at the sides which are aligned with the side panels 18 which are secured to the sides of the cabinet. A toe receiving panel 19 is supported below the doors on the front of the cabinet to be in aligned flush relation with the doors 13 and 14.

The cooking top 15 is provided with a plurality of burners 21, herein illustrated as being six in number, which may be alike or which may vary in heat capacity. A control switch, operated by dial knobs 22, is provided for each of the burners, the dial knobs being aligned along the face of the front flange 16. A pair of outlet receptacles

23 is also illustrated as being mounted on the face of the flange 16. An electrically operated clock 24, having timing contacts therein, is mounted upon the top of the splash back 17 and supports a light receptacle and reflector 25 for a lamp which illuminates the clock and the stove top.

Within the base cabinet, the ovens 11 and 12 are mounted in the conventional manner, with the exception that the ovens are joined together at the bottom by a rib 26 and at the top and back by an L-shaped channel element 27 which is aligned with the rib. Sealing elements 28 are disposed on the projecting arms of the channel element 27 and the rib 26 has an embossed sealing and guide element 29 along the top thereof. A partition 31, which is preferably of hollow box section filled with insulating material, has a recess 32 along its bottom edge. The recess mates with the guide element 29 on the rib 26 and forms a seal for the bottom thereof when the partition is disposed within the oven to divide it into two compartments, as illustrated in Fig. 1. The rear and top edges of the partition are sealed by the sealing elements 28.

Rack supporting elements 33 are provided on the side walls of the partition 31 and on the side walls 34 of the oven in aligned relation. These may be separate channel elements, as illustrated in the drawing, or may be pressed-out portions of the walls, as conventionally employed. A plurality of short racks 35 are provided for each of the oven compartments 11 and 12 when used separately, and large racks 36 are supported by the two side walls 34 when the central partition 31 is removed and the two oven compartments 11 and 12 are employed as a single compartment.

A rack storage compartment 37 is provided below the oven compartments 11 and 12, having projecting ledges 38 for supporting the partition 31 and projecting ledges 39 for supporting the short racks 35. Additional projecting ledges 41 are provided near the bottom of the compartment 37 for supporting the large racks 36. The compartment is enclosed by the toe receiving panel 19 which is mounted on hinges 42 to swing downwardly, the movement of which is limited by arms 43 operating in slots 44 in the stove frame panel 45.

The oven enclosing doors 13 and 14 are mounted on hinges 46 on the stove frame panel 45. The hinges are secured at the sides and at the center of the frame panel above which slots are provided for receiving stop elements 47 which limit the outward and downward movement of the doors. The doors are herein illustrated as being of hollow box section, having a double glass window 48 in the faces thereof. On the top of the cabinet 10, beneath the cooking top 15, three trays 49 are provided, one under each pair of front and back burners 21. The trays are mounted on slides and may be pulled forward for cleaning when the stove doors 13 and 14 are open.

Each of the oven compartments 11 and 12 has an electric heating unit 51 in the bottom and a broiling unit 52 in the top of conventional form. Both of these heating units are electrically energized through a plug and socket connection 53 at the back of the oven which permits the units to be removed for cleaning and repair. The doors, as illustrated more specifically in Fig. 4, have a sealing strip 54 between their mating edges for sealing the doors when the partition 31 is removed. The sealing strip 54 is supported on the edge of the door 13 and is provided with a

flexible portion which bows outwardly into engagement with the edge of the door 14.

Independent circuits are provided for each of the oven compartments connecting the two heating units 51 and 52 in a selective manner, the top unit for broiling, the bottom unit for baking, and both units for preheating. The desired temperature is obtained by adjusting a dial knob 55 for the compartment 11 and a dial knob 56 for the compartment 12. A selecting knob 57, adjacent to each of the dial knobs, is employed for adjusting the circuits for broiling, baking and preheating. A pair of lights 58 and 59 is employed, one on each side of the dial knob for each of the units 51 and 52, to show whether one or both are in operation.

The two circuits are connected by conduits 61 and 62 to the timing clock 24 of conventional form, so that either or both of the circuits to the compartments can be operated through the timing mechanism of the clock. A third dial knob 64 on the splash back 17 is similar in appearance to the dial knobs 55 and 56 but is employed to operate a timing element by which a number of minutes may be set off and a bell rung at the end of the period.

Thermostatic control bulbs 65 and 66 for the electric circuits of the oven compartments 11 and 12, respectively, are located within each respective compartment adjacent to the movable partition 31 so as to have both heating units of each compartment controlled at the same point in the oven. This permits independent control of either or both compartments when the partition 31 is in place, and operates the oven elements simultaneously when the partition 31 is removed because of their adjacent location within the oven. Should one door only of the oven compartment be opened when the large oven compartment is being utilized, the thermostatic bulb back of the door may energize the heating units on that side of the oven compartment to pick up the temperature on that side until it is equalized within the entire large oven compartment.

Referring to Figs. 6 and 7, a slightly different form of support for the door hinges is illustrated. In this embodiment, a separate channel bar 70 spans the side frame of the cabinet 10 back of the front frame panel 45 and beneath the oven compartments. The bar is disposed out of the direct oven heat and will not warp as readily as the panel 45 and therefore will retain the adjacent edges of the doors 13 and 14 properly aligned and effectively sealed when the doors are in closed position. The center hinges 71 are secured directly to the web of the bar 70 and project through enlarged slots in the frame panel 45 to permit relative movement therebetween which may occur due to the difference in temperature between the bar and panel. Insulating material 72 surrounds the oven compartments on the top, bottom, sides and back and provides insulation for the channel bar 70 to limit the degree of temperature change occurring thereto.

What is claimed is:

1. A stove having a base cabinet with an oven compartment provided therein, a removable vertical partition in said oven compartment dividing it into two separate oven compartments, a ridge extending upwardly from the bottom of the oven compartment from the front to the rear thereof on which said partition rests, said ridge and partition having complementary rail and groove contact means mounted thereon and constituting a connection and seal therebetween, a channel pre-

senting downwardly from the top of the oven encompassing the upper edge of the partition, said partition being hollow, and insulating material within said hollow partition.

2. In a stove, a base cabinet having an oven compartment therein, a pair of aligned adjacent doors for enclosing said compartment, a vertical partition removably supported at the mating edges of the doors for dividing the compartment into two substantially equal and separate oven compartments, a heating unit in each of said compartments, separate supply and control means for said separate heating units including thermostatic means, and means mounting said thermostatic control means within said separate oven compartments adjacent to each other and adjacent to and independent of said removable partition for independently controlling each heating unit from the same area within the oven compartment when the partition is removed.

BYRON C. GOULD.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
320,111	Anthony	June 16, 1885
518,903	Stone	Apr. 24, 1894
1,109,263	Taylor	Sept. 1, 1914
1,398,725	Kneier	Nov. 29, 1921
1,533,283	Thornton	Apr. 14, 1925
1,745,420	Hewitt	Feb. 4, 1930
1,748,194	Smith	Feb. 25, 1930
1,878,332	Schirmer	Sept. 20, 1932
2,339,398	Hennessy	Jan. 18, 1944
2,478,526	Danford	Aug. 9, 1949