Nov. 30, 1943. S. H. HOBSON 2,335,279

RANGE CONSTRUCTION

Filed Dec. 30, 1939 4 Sheets-Sheet 1

Fig. 1

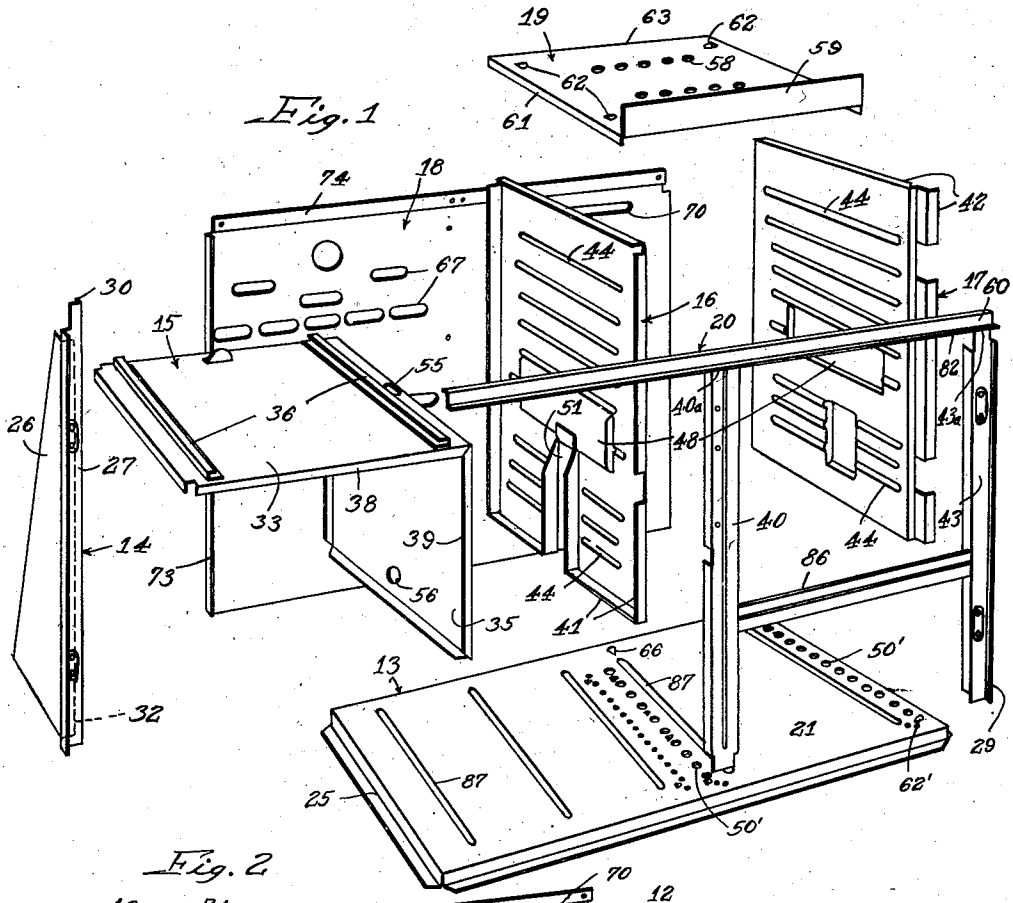
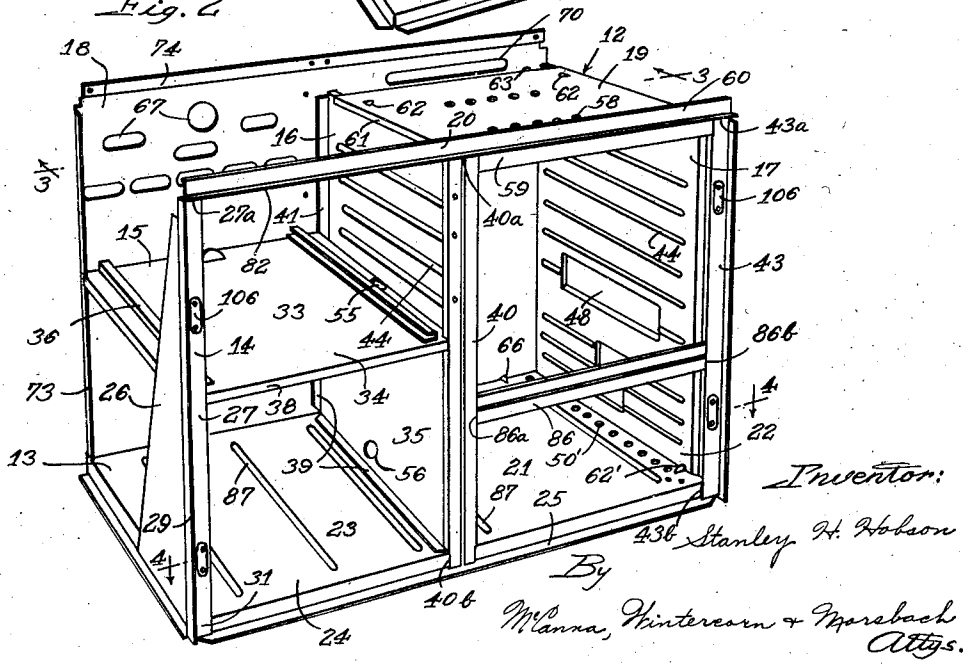


Fig. 2



Inventor:
Stanley H. Hobson
By
McManna, Hintercorn & Morsbach
Attys.

Nov. 30, 1943. S. H. HOBSON 2,335,279

RANGE CONSTRUCTION

Filed Dec. 30, 1939 4 Sheets-Sheet 2

Fig. 4

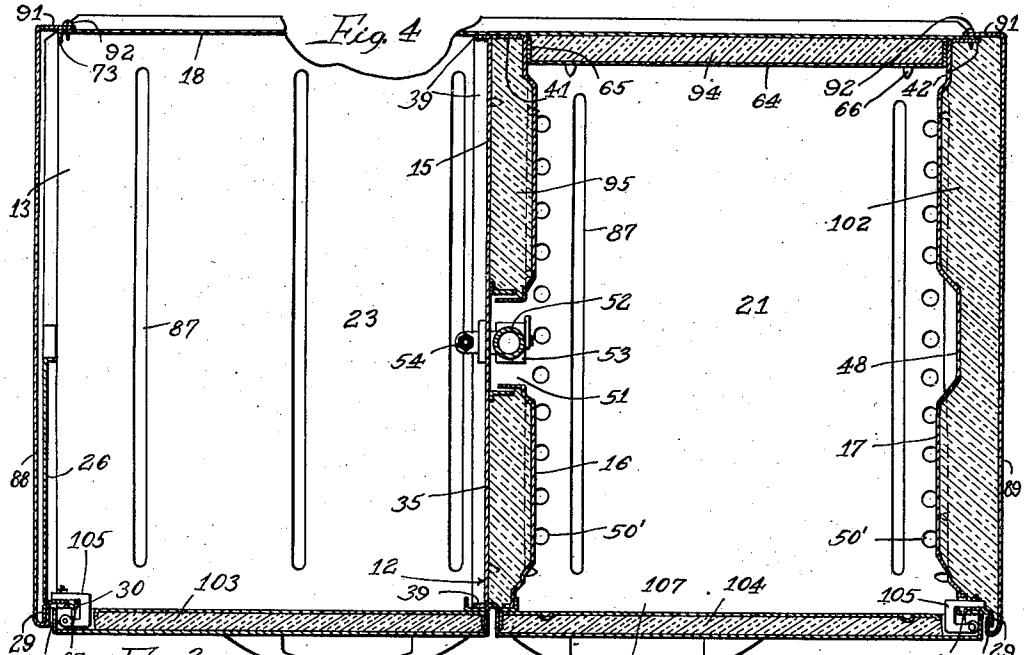
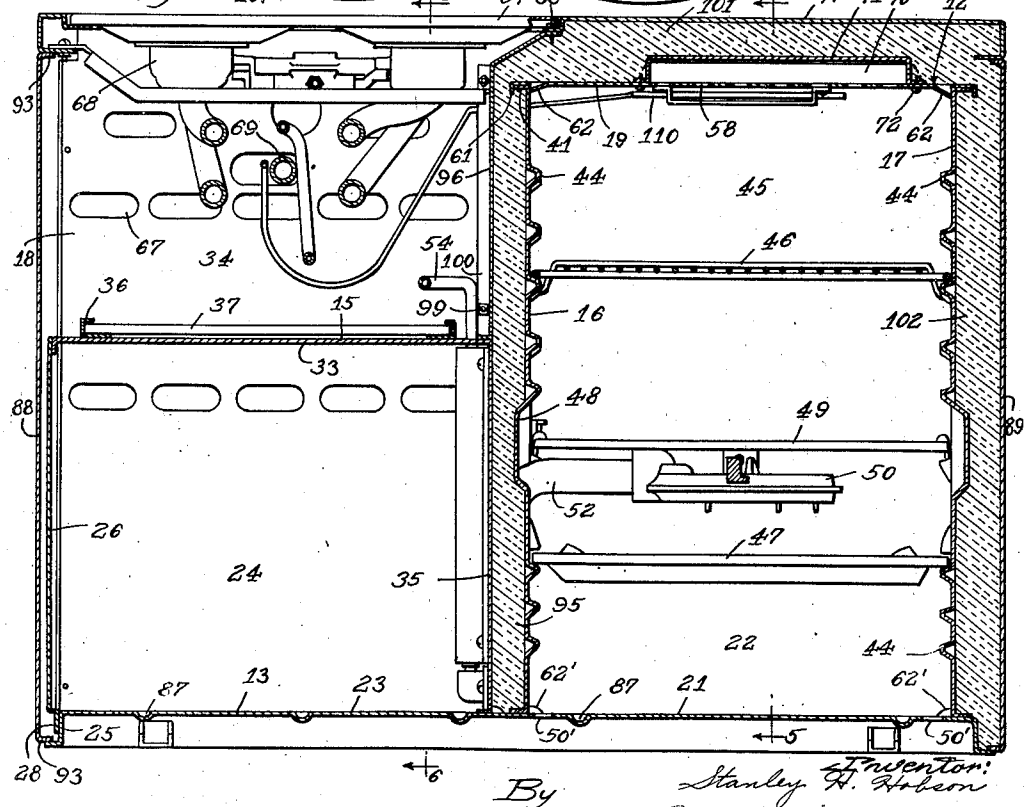


Fig. 3



Inventor:
Stanley H. Hobson

By McCanna, Hintercorn & Morsbach
Attys.

Nov. 30, 1943. S. H. HOBSON 2,335,279

RANGE CONSTRUCTION

Filed Dec. 30, 1939 4 Sheets-Sheet 3

Fig. 5

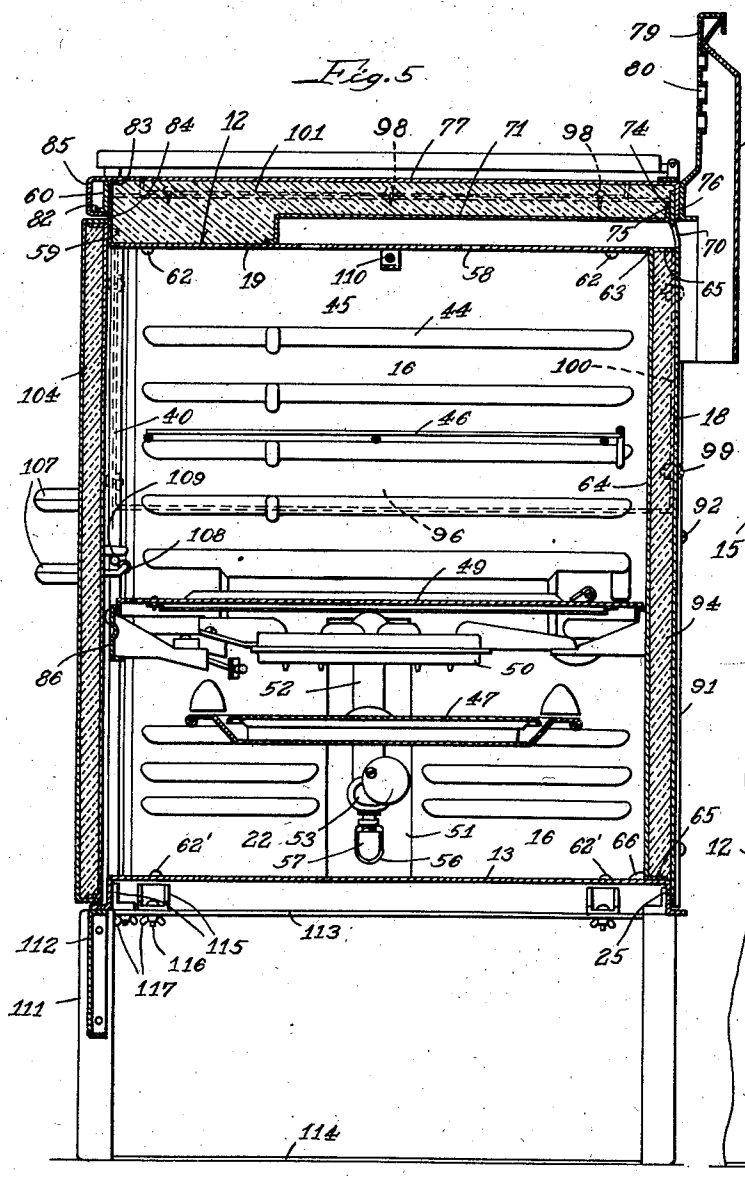
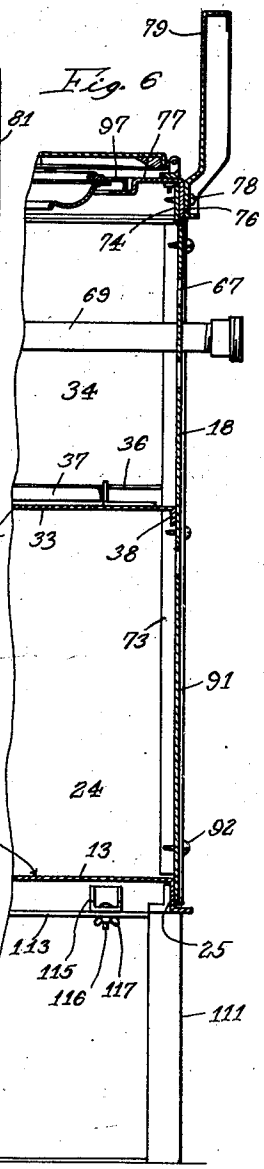


Fig. 6



Inventor:
Stanley H. Hobson
By McCann, Hinterearn & Morelock
Attys.

Nov. 30, 1943. S. H. HOBSON 2,335,279

RANGE CONSTRUCTION

Filed Dec. 30, 1939 4 Sheets-Sheet 4

Fig. 8

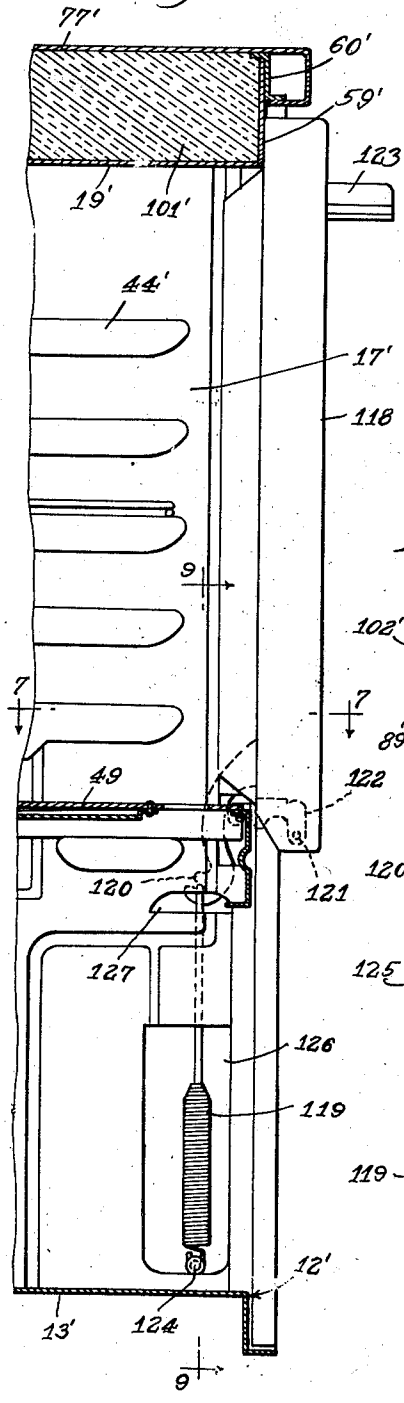


Fig. 7

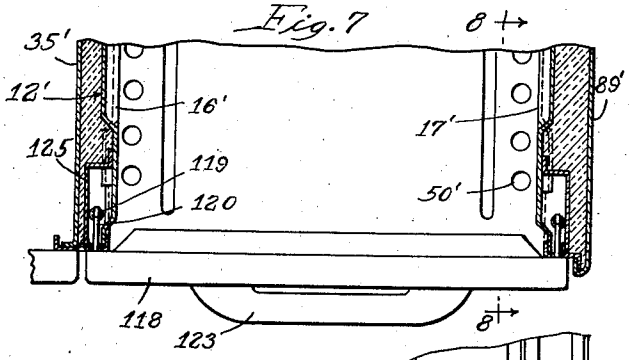


Fig. 10

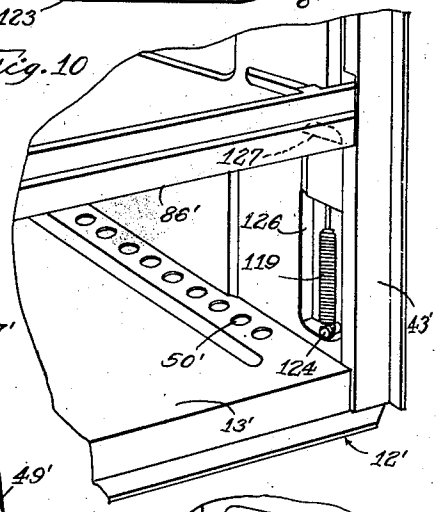


Fig. 9

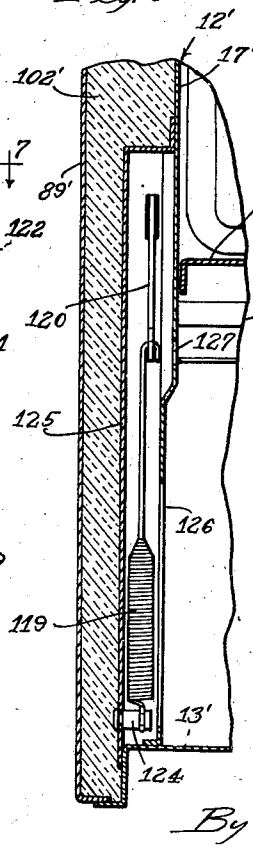
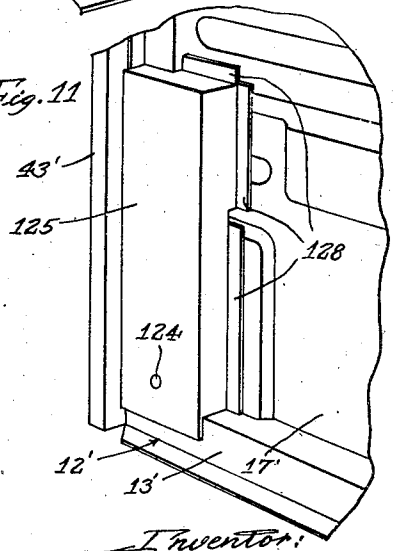


Fig. 11



Inventor:
Stanley H. Hobson

By
McCanna, Wintercorn & Morsbach
Attys.

Patented Nov. 30, 1943 2,335,279

UNITED STATES PATENT OFFICE

2,335,279

RANGE CONSTRUCTION

Stanley H. Hobson, Rockford, Ill., assignor to Geo. D. Roper Corporation, Rockford, Ill., a corporation of Illinois

Application December 30, 1939, Serial No. 311,715

12 Claims. (Cl. 126—39)

This invention relates to cooking stoves or ranges and is particularly concerned with an improved type of construction wherein many parts which according to old practice were formerly bolted together and to angle iron framework are specially formed of sheet metal to permit of their being welded together so as to produce a lighter, stronger and more rigid, and also more economical construction.

In accordance with my invention frame members as well as wall members are all fabricated from sheet metal and welded together to form a chassis, which is then dipped in ground coat enamel and "fired" so that the resulting inside structure for a stove is not only more rigid, stronger, lighter, and cheaper than earlier constructions with which I am familiar, but the same is sealed by the filling with enamel of all joints between the welded together parts and is thoroughly protected not only on the exposed inside surfaces but all other surfaces as well and will accordingly resist corrosion and greatly outlast other constructions in which most of the parts corresponding to those in the present construction were merely japanned. Then, too, the rigidity of the chassis eliminates much of the damage to the porcelain enameled outer panels of the range in shipment, such damage being common with the old bolted constructions due to the tendency of the frame structure to weave and distort, thus placing stresses upon the porcelain enameled panels sufficient oftentimes to cause the enamel to "pop."

The accompanying drawings illustrate my invention, and in these drawings

Figure 1 is a perspective view of the component parts of the range chassis disposed generally as in Fig. 2 but not welded together;

Fig. 2 is a perspective view of the welded chassis;

Fig. 3 is a vertical cross-section through a range embodying the welded chassis, the latter appearing in section in the plane of the line 3—3 of Fig. 2;

Fig. 4 is a horizontal section through the range taken in the plane of the line 4—4 of Fig. 2;

Fig. 5 is a longitudinal vertical section on the line 5—5 of Fig. 3;

Fig. 6 is a fragmentary vertical section in the plane of the line 6—6 of Fig. 3;

Fig. 7 is a fragmentary horizontal section through another range of slightly modified construction, this view being in the plane of the line 7—7 of Fig. 8;

Fig. 8 is a fragmentary vertical section in the plane of line 8—8 of Fig. 7;

Fig. 9 is a sectional detail on the line 9—9 of Fig. 8, and

Figs. 10 and 11 are fragmentary perspective views of a corner portion of the chassis illustrated in Figs. 7 to 9.

Similar reference numerals are applied to corresponding parts throughout the views.

In accordance with the present invention, the chassis 12, best illustrated in Fig. 2, is first made up from sheet metal parts welded together. Then the chassis is dipped in ground coat enamel and "fired," after which the chassis is covered with insulation on the oven portion and the outer panels and doors are applied to complete the stove illustrated in Figs. 3 to 6. The sheet metal parts for the chassis are numbered 13 to 20 in Fig. 1. 13 is a one-piece rectangular base panel, the portion 21 of which forms the bottom of the broiler compartment 22, and the portion 23 of which forms the bottom of a storage or utility compartment 24, the panel 13 being flanged downwardly and outwardly along its four sides, as indicated at 25, giving it strength and rigidity while also facilitating application thereto of the members 14—18 and 20. 14 is an upright end front frame member made of two sheet metal pieces 26 and 27, 26 being of right triangular shape with the base of the triangle lowermost and having a bottom flange 28 which is arranged to be spot welded to the downwardly flanged end 25 of the base panel 13, as shown in Fig. 3. The piece 27 is flanged forwardly longitudinally as at 29 and rearwardly longitudinally as at 30 and is arranged to be welded at its lower end 31 to the downwardly flanged front 25 of the base 13. The flanging 29—30 obviously lends strength and rigidity and the upright 14 is braced by the triangular part 26 so as to be in rigid right angle relationship to the base 13, there being an inturned longitudinal flange 32 on the front edge of the brace 26 welded to the back of the front frame piece 27.

Member 15 serves the triple purpose of reinforcing the chassis in vertical and horizontal planes, while forming the bottom of the burner box and a portion of the outer wall of the oven. It is made from a single piece of sheet metal bent to L-shaped cross-section so as to provide a horizontal portion 33 to form the bottom of a burner box compartment 34, and a vertical depending portion 35 to form the lower portion of the outer wall for one side of the oven section. The portion 33 has channel-shaped guides 36 welded to the

top thereof in parallel relationship, and a drip pan 37 is arranged to slide in these guides, as indicated in Fig. 3. The member 15 is flanged downwardly on three sides of the portion 33, as at 38, and laterally on three sides of the portion 35, as at 39. The end and front flanges 38 are welded to the inner sides of the members 26 and 27 respectively, while the rear flange 38 is welded to the member 18. The rear flange 39 is welded to the member 18, and the front flange 39 is welded to the middle upright member 40 of the front frame member 20. The lower flange 39 is welded to the base member 13.

The inner oven side wall 16 is made from a single piece of sheet metal. It is flanged laterally, outwardly with respect to the oven section, along all four edges, as at 41, whereby it is adapted to be welded to the back member 18 and front frame member 40 and base member 13. The opposite inner side wall of the oven section is formed by the member 17, which is likewise made from a single piece of sheet metal flanged laterally, as at 42, outwardly with respect to the oven section, along the four edges thereof to permit welding the same to the back member 18, base member 13, and front frame member 43. The members 16 and 17 are both formed between dies to provide inwardly projecting ribs 44 in the baking oven compartment 45 as well as in the broiler compartment 22. An oven rack 46 is shown slidably engaged on two associated ribs 44 in the baking oven, and a broiler pan 47 is indicated slidably engaged on a related pair of ribs 44 in the broiler compartment in Fig. 3. Certain of the ribs 44 adjacent the struck-out rectangular portions 48 in the members 16 and 17 provide support for an oven bottom 49, as indicated in Fig. 3, above the oven burner 50. The member 16 is slotted vertically from the lower edge, as indicated at 51 in Fig. 1, for extension therethrough of the mixing tube 52 of the burner. The mixer 53 on the lower end of this tube has gas delivered thereto through a tube 54 extended from the burner box compartment 34 downwardly through a hole 55 in the burner box bottom 33 and laterally through another hole 56 in the outer oven wall 35, the tube 54 terminating in a jet fitting 57, as indicated in Fig. 5.

The struck-out portions 48 in the side walls 16 and 17 of the oven section afford vertical passages alongside the oven bottom 49 establishing freer communication between the top of the broiler compartment 22 and the bottom of the baking oven 45, so that products of combustion from the burner 50 may circulate upwardly from the broiler compartment through the baking oven before discharge through the openings 58 in the top wall of the oven, which is formed by the member 19. The base 13 has two rows of holes 50' which serve to admit air to the broiler compartment 22 to supply primary and secondary air to the burner 50.

The oven top wall 19 is made from a single piece of sheet metal flanged upwardly at the front as at 59 to permit welding thereof to the top front frame member 60. The top wall 19 is downwardly flanged along the opposite sides as at 61 to fit down alongside the outwardly bent top flanges 41 of the inner side walls 16 and 17 of the oven to which the top 19 is welded. There are also downwardly struck "eyebrow" projections 62 which engage the inner sides of the walls 16 and 17 to locate the same in properly spaced relation prior to the welding of the members 16, 17, and 19 together. Similar eyebrow projections 62' on the base member 13 serve further to locate the walls 16 and 17 in properly spaced relation. The top member 19 terminates in spaced relation to the back 18, as at 63, to provide a space between the top 19 and the back 18 to admit the inner rear wall 64 which is slipped into the finished chassis during the assembling of the stove, this wall being rearwardly flanged as at 65 on its four edges and being enameled to match the chassis. Eyebrow projections 66 on the base 13 at the rear end thereof serve by engagement with the lower end of the wall 64 to locate it in properly spaced relation to the back wall 18.

The back wall 18 is made from a single piece of sheet metal and has openings 67 punched therein in that portion forming the back of the burner box compartment 34 to admit air to support combustion at the cooking top burners 68, one of these openings serving also to admit the gas supply manifold 69. An elongated slot 70 is provided in the upper end portion of the back wall 18 above the oven top 19 for communication with the outlet flue 71, which is suitably bolted as at 72 onto the oven top 19 over the openings 58. The back wall 18 is welded along its lower edge to the downwardly flanged rear edge 25 of the base 13 and, as previously stated, is welded to the flanges 41 and 42 on the rear of the inner oven side walls 16 and 17 and also to the rear flanges 38 and 39 on the portions 33 and 35 of member 15. The free end of the back wall 18 is flanged forwardly as indicated at 73 for reinforcement.

The front frame 20 has its upright members 40 and 43 welded to the top cross member 60, as at 40*a* and 43*a*, and the other upright front frame member 27 is welded to the end of the top cross member 60 at 27*a*. The lower ends of the upright members 40 and 43 are also welded to the base 13 at 40*b* and 43*b* respectively, and there is a cross member 86 which is disposed in front of the oven bottom 49 and separates the broiler compartment 22 from the baking oven 45, and this cross member is welded to the upright members 40 and 43 at its opposite ends as at 86*a* and 86*b*.

It should be clear from the foregoing description of the chassis 12 that I have provided an improved range construction which not only simplifies the assembling of the range and lowers the ultimate cost, but actually greatly improves the quality of the product from the standpoint that the welded chassis can be enameled all over economically and, due to its welded construction is much more rigid than where the parts are bolted together. The chassis has all of the joints between the welded together parts filled with enamel from both sides and in that way the oven section is sealed against leakage of heat and moisture through these joints, thus protecting the insulating material surrounding the oven section from contamination besides eliminating the likelihood of the sheet metal parts rusting at the joints by the collection of moisture therein. The present range is also much lighter than with other constructions, as can readily be appreciated when it is considered that with the present construction I have found it entirely feasible to use .050" stock for all of the front frame members 27, 40, 43, 60, and 86, whereas in the old bolted constructions ⅛" stock was commonly used in the band and angle iron stock for frame members. In the present construction all of the larger parts like 13, 15, 16, 17, 18, and 19 are all of thinner stock than that used in the front frame parts 27, 40, 43, 60, and 86, but are flanged

along the edges both to lend stiffness and strength as well as to facilitate spot welding the parts together. The ribbing of walls 16 and 17 at 44 also lends strength and rigidity, and the same is true of the longitudinal ribbing of the base 13 as indicated at 87. Such ribbing is not necessary in the portion 33 of member 15 because of the reenforcement afforded by the guides 36 that are welded thereto. The brace 26 despite its thin sheet metal construction affords ample reenforcement and buttressing for the front frame member 14. The one-piece L-shaped construction of member 15 is also for strength and rigidity in the chassis and assures parallelism of the front frame 20 with the back 18 while also tending to resist distortion of the chassis and keep it square. The portion 33 has a reenforcing function in a horizontal plane while the portion 35 integral therewith has a reenforcing function in a vertical plane.

The upper edge porton 74 of the back wall 18 is offset slightly forwardly for abutment with the forwardly flanged rear edge 75 of the flue 71 as shown in Fig. 5 and is arranged to be secured to the rear downwardly projecting flange 76 of a top panel 77 as by means of screws 78, one of which appears in Fig. 6 as serving to fasten the lower edge of a back rail 79 to the top panel 77 also. One end portion of the back rail 79 has grill openings 80 therein as shown in Fig. 5, and a flue 81 attached to the back of the rail is open at the bottom well below the level of the slot 70 and serves to conduct the products of combustion from the oven upwardly for discharge forwardly over the cooking top through the openings 80 in a well known manner. The horizontal top front frame member 60 is flanged forwardly along its lower edge as at 82 and rearwardly along its upper edge as at 83, and there is a rearwardly directed flange 84 on the lower edge of the downwardly flanged front edge portion 85 of the top 77 arranged to engage under the flange 82 while the top rests on the flange 83 as is clearly illustrated in Fig. 5. In that way the top 77 does not require any screw fasteners along the front edge but only along the rear edge, and the assembling of the range is simplified and the cost lowered, while at the same time a better appearance and stronger construction is obtained. The side panels 88 and 89 are arranged to be secured to the chassis in a similar manner, the same having inwardly and rearwardly flanged front edges 90 arranged to hook over the forwardly flanged edges 29 of the front frame uprights 27 and 43 clearly shown in Fig. 4, while the inwardly flanged rear edges 91 of these panels are arranged to engage behind the back wall 18 and be fastened thereto suitably by screws 92, thus eliminating the necessity for screw fastenings along more than just the rear edges of the panels 88 and 89. The latter have inwardly flanged upper and lower edges, as indicated at 93 in Fig. 3, to fit between the outwardly projecting end flanges of the base 13 and the inwardly bent flanges on the ends of the top 77. It is clear, therefore, that the present construction enables the application of the porcelain enameled outer panels 88 and 89 and the porcelain enameled top panel 77 with a minimum amount of screw fastenings, thus proportionately reducing the danger of the enamel being placed under stress and chipping or "popping." The top 77 is adequately supported along its entire front edge portion by the flanges 82 and 83 so that the single row of screws 78 along the rear edge serves for its secure fastening. The panels 88 and 89 are adequately supported along their lower edges by their lower flanges 93 engaging the outwardly bent flanges 25 on the ends of the base 13, while the top 77 further serves to locate these panels by engagement with their inwardly flanged upper edges 93 so that the single row of screws 92 provided for the fastening of each of these panels is sufficient.

The oven section is completely insulated, and the present type of construction facilities the insulation because when the chassis is completed, as disclosed in Fig. 2, all that remains before applying the insulation to the exposed outside surfaces of the inner oven walls 16 and 17 and top wall 19 is to apply the flue 71 and rear liner wall 64, the wall 64 being inserted along with its layer of insulation 94 before the flue 71 is assembled in place. The layer 95 of insulation is tucked down between the oven wall 16 and the adjacent portion 35 of the member 15, after which a sheet metal cover plate 96 is applied, reaching upwardly from the burner box bottom 33 to the top 77 alongside the cooking top portion 97 thereof where it is fastened to the top 77 as by screws 98. Bolts 99 serve to fasten the flanged rear edges 100 of the plate 96 to the back wall 18, and a similar method of fastening is utilized to secure the flanged front edge of the plate 96 to the back of the middle upright front frame member 40. The plate 96 therefore cooperates with the portion 35 of member 15 to complete one of the outer side walls for the insulated oven section while also providing an inner side wall for the burner box compartment as well as an intermediate support for the top 77 adjacent the cooking top portion 97 thereof so that the top will not sag under weight of utensils placed thereon. Other layers of insulation material 101 and 102 are provided to cover the top 19 and other side 17 of the oven. After this insulation has been applied, the outer panels 88 and 89 and the top panel 77 can be assembled in place. The doors indicated at 103 and 104 are also insulated, and in the construction shown in Figs. 3 to 5 extend the full height of the chassis, as indicated in Fig. 5, and are carried on concealed hinge brackets 105 bolted to the portions 106 of the front upright frame members 27 and 43. The doors have handles 107, and each door has a suitable roller catch 108 projecting from the back thereof to cooperate with a detent projection 109 on the middle front upright frame member 40. When the door 103 is opened, a panel (not shown) closing the front end of the burner box compartment 34 is exposed to view with the knobs thereon for controlling gas cocks associated with the various cooking top burners 68 as well as a knob connected with an oven heat regulator for controlling the delivery of gas to the oven burner 50. 110 is the oven thermostat associated with the oven heat regulator in the usual way.

The range just described is adapted to be mounted on legs 111 of any suitable or preferred construction, those illustrated in Figs. 5 and 6 being in the form of sheet metal panels, one under each end of the range extending from front to back, the legs being interconnected with the front ends thereof by a transverse front panel 112. The legs 111 are of channel-shaped cross-section providing top and bottom longitudinal flanges 113 and 114 respectively. Lugs 115 welded to the inner side of the downwardly projecting flanges 20 of the base 13 have studs 116 projecting downwardly therefrom arranged to engage in holes provided therefor in the flange 113 and

wing nuts 117 are threaded on the projecting ends of said studs.

In Figs. 7 to 11 I have illustrated a stove of generally similar construction to the one just described but having the conventional type of downwardly swingable oven doors as indicated at 118, counterbalanced by means of coiled tension springs 119 connected to inwardly projecting arms 120 on the lower end of the door adjacent its pivotal connections 121 with the hinge brackets 122 fixed to the range chassis. The handles 123 on these doors are provided at the upper end thereof. The lower ends of the springs 119 are anchored to the stove chassis on studs 124 so that when the door 118 is opened it will not drop by gravity but be substantially in equilibrium in any position. A sheet metal box 125 is provided on the outer side of each of the inner oven walls 16' and 17' to enclose the two springs 119 provided for the door 118, and openings 126 and 127 are provided in vertically spaced relation in the oven walls for the circulation of air through and around the springs 119 to avoid their overheating. The studs 124 are suitably provided on the walls of these boxes as illustrated. The openings 126 are large enough to expose substantially the entire spring even when extended. The openings 127 are in vertically spaced relation to the upper ends of the openings 126 to give a stack effect and accordingly induce air to enter the openings 126 and escape through the openings 127. The openings 127 are furthermore so located that the assembling of the hooked upper ends of the springs onto the arms 120 is facilitated, the openings being approximately at the same level with the lower ends of the arms 120 when the oven door is closed, as clearly appears in Figs. 8 and 9. The boxes 125 are flanged as indicated at 128 to permit welding the same to the adjacent inner oven walls 16' and 17'.

It is believed the foregoing description conveys a good understanding of the objects and advantages of my invention. The appended claims have been drawn to cover all legitimate modifications and adaptations.

I claim:

1. In a cooking range construction, a sheet metal chassis having a sheet metal body frame, the frame comprising a horizontal base panel, a vertical back panel, and a vertical front frame, all of sheet metal having adjoining edge portions permanently secured together in overlapping relation, and a sheet metal oven liner unit comprising opposed vertical side panels and a horizontal top panel all of sheet metal permanently connected together, said side and top panels having flanges on the front edges permanently secured to the front frame, said side panels having flanges on the bottom edges permanently secured to the base panel and flanges on the rear edges permanently secured to the back panel, all of the parts permanently secured together being so secured before enameling, the entire chassis structure being coated with enamel on all surfaces, said enamel coating covering the portions permanently secured together so as to fill the joints between said portions and thereby seal the oven against leakage of heat and moisture through these joints.

2. A cooking range construction comprising a sheet metal chassis having a sheet metal body frame, the frame comprising a horizontal base panel, a vertical back panel, and a vertical front frame, all of sheet metal having adjoining edge portions permanently secured together in overlapping relation, and a sheet metal oven liner unit comprising opposed vertical side panels and a horizontal top panel all of sheet metal permanently connected together, said side and top panels having flanges on the front edges permanently secured to the front frame, said side panels having flanges on the bottom edges permanently secured to the base panel and flanges on the rear edges permanently secured to the back panel, all of the parts permanently secured together being so secured before enameling, the entire chassis structure being coated with enamel on all surfaces, said enamel coating covering the portions permanently secured together so as to fill the joints between said portions and thereby seal the oven against leakage of heat and moisture through these joints, the top panel of the oven liner unit having vent openings provided therein, a separate sheet metal flue panel detachably secured to said top panel over said openings in communication with a vent opening provided in the back panel, a separate vertical sheet metal rear oven liner panel detachably secured in the rear portion of the oven liner unit to form with the back panel a hollow back wall for the oven, and outer sheet metal side and top panels detachably secured to the front frame and back panel to form with the oven liner unit hollow side and top walls for said oven.

3. In a cooking range construction, a sheet metal chassis having a sheet metal body frame, the frame comprising a horizontal base panel, a vertical back panel, and a vertical front frame, all of sheet metal having adjoining edge portions permanently secured together in overlapping relation, and a sheet metal oven liner unit at one end of said body frame comprising opposed vertical side panels and a horizontal top panel all of sheet metal permanently connected together, said side and top panels having flanges on the front edges permanently secured to the front frame, said side panels having flanges on the bottom edges permanently secured to the base panel and flanges on the rear edges permanently secured to the back panel, the other end of said body frame being adapted to form a cooking top section, and a one-piece sheet metal panel bent to L-shape so as to provide a horizontal panel section and a vertical panel section on one side edge thereof, the panel sections having flanges on the front and rear edges permanently secured to the front frame and rear panel respectively, the vertical panel forming with the adjacent portion of the side panel of the oven liner unit a hollow oven wall section, while the horizontal panel section defines the bottom of a burner box compartment for the cooking top section and the top wall of another compartment over the base panel, all of the parts permanently secured together being so secured before enameling, the entire chassis structure being coated with enamel on all surfaces, said enamel coating covering the portions permanently secured together so as to fill the joints between said portions and thereby seal the oven against leakage of heat and moisture through these joints.

4. A cooking range construction comprising a sheet metal chassis having a sheet metal body frame, the frame comprising a horizontal base panel, a vertical back panel, and a vertical front frame, all of sheet metal having adjoining edge portions permanently secured together in overlapping relation, and a sheet metal oven liner unit at one end of said body frame comprising opposed vertical side panels and a horizontal top panel all of sheet metal permanently connected

together, said side and top panels having flanges on the front edges permanently secured to the front frame, said side panels having flanges on the bottom edges permanently secured to the base panel and flanges on the rear edges permanently secured to the back panel, the other end of said body frame being adapted to form a cooking top section, a one-piece sheet metal panel bent to L-shape so as to provide a horizontal panel section and a vertical panel section on one side edge thereof, the panel sections having flanges on the front and rear edges permanently secured to the front frame and rear panel respectively, the vertical panel forming with the adjacent portion of the side panel of the oven liner unit a hollow oven wall section, while the horizontal panel section defines the bottom of a burner box compartment for the cooking top section and the top wall of another compartment over the base panel, all of the parts permanently secured together being so secured before enameling, the entire chassis structure being coated with enamel on all surfaces, said enamel coating covering the portions permanently secured together so as to fill the joints between said portions and thereby seal the oven against leakage of heat and moisture through these joints, a top panel having one end portion coacting with the top panel of the oven liner unit to form a hollow top wall for the oven, and another end portion coacting with the front frame and rear panel to form a cooking top section, and other outer sheet metal panels on opposite sides of the oven liner unit, one coacting with the vertical panel section of the L-shaped panel and correlated side panel of said oven liner unit to complete a hollow side wall for the oven, and the other coacting with the opposite side panel of the oven liner unit to form the other hollow side wall for the oven.

5. A cooking range construction as set forth in claim 4, wherein the top panel of the oven liner unit has vent openings provided therein, the structure including a separate sheet metal flue panel removably secured to said top panel over said openings and communicating with a flue opening provided in the back panel, and a separate vertical sheet metal rear oven liner panel detachably secured in the rear portion of the oven liner unit to form with the back panel a hollow back wall for the oven.

6. A cooking range construction as set forth in claim 3, including an inner vertical sheet metal brace member of right triangular form, having a vertical front edge portion permanently secured to the front frame prior to the enameling of the entire chassis and a horizontal bottom portion permanently secured to the end of the base panel prior to the enameling of the entire chassis, said brace member being also permanently secured intermediate the upper and lower ends thereof to the adjacent end of the horizontal section of said L-shaped panel prior to the enameling of the entire chassis, said brace member being enameled all over like the rest of the chassis, and an outer end panel for the cooking top section of the range extending from front to rear and bottom to top thereof in parallel relation to the brace member.

7. A cooking range construction comprising a sheet metal chassis having a sheet metal body frame, the frame comprising a horizontal base panel, a vertical back panel, and a vertical front frame, all of sheet metal having adjoining edge portions permanently secured together in overlapping relation, one end of said body frame being adapted to form part of an oven section and the other end being adapted to form part of a cooking top section, a one-piece sheet metal panel bent to L-shape so as to provide a horizontal panel section and a vertical panel section on one side edge thereof, the panel sections having flanges on the front and rear edges permanently secured to the front frame and rear panel respectively, the vertical panel section adapted to form with the side wall of an oven liner unit a hollow oven side wall, while the horizontal panel section defines the bottom of a burner box compartment for the cooking top section and the top wall of another compartment over the base panel, an oven liner unit mounted on the other end of said frame and comprising opposed side walls and a top wall, one of the side walls forming with the vertical panel section aforesaid a hollow oven side wall, a top panel for said range having one end portion coacting with the top wall of the oven liner unit to form a hollow top wall for the oven and having another end portion forming a cooking top section over the horizontal panel section of the L-shaped panel, and vertical end panels on opposite ends of said body frame, one of which cooperates with the adjacent side wall of the oven liner unit to form another hollow oven side wall.

8. A cooking range construction as set forth in claim 7, including an inner vertical sheet metal brace member of right triangular form, having a vertical front edge portion permanently secured to the front frame and a horizontal bottom portion permanently secured to the end of the base panel, said brace member being also permanently secured intermediate the upper and lower ends thereof to the adjacent end of the horizontal panel section of said L-shaped panel, said brace member being enameled all over like the rest of the chassis, and an outer end panel for the cooking top section of the range extending from front to rear and bottom to top thereof in parallel relation to the brace member.

9. In a cooking range construction comprising a body frame, the frame comprising a horizontal base panel, a vertical back panel, and a vertical front frame, the three elements named having adjoining edge portions secured together, a one-piece sheet metal panel bent to L-shape so as to provide a horizontal panel section and a vertical panel section on one side edge thereof, the panel sections having flanges on the front and rear edges secured to the front frame and rear panel respectively, whereby the horizontal panel section in addition to forming the bottom of one compartment and the top of another compartment in the range reinforces the range in a horizontal plane, and the vertical panel section in addition to forming one side wall of one of said compartments reinforces the range in a vertical plane.

10. A cooking range construction as set forth in claim 9, including an inner vertical sheet metal brace member of right triangular form disposed on that side of said L-shaped panel opposite the vertical panel section and having a vertical front edge portion secured to the front frame and a horizontal bottom portion secured to the end of the base panel, said brace member being also secured intermediate the upper and lower ends thereof to the adjacent end of the horizontal panel section of said L-shaped panel.

11. In a cooking range construction, a sheet metal chassis having a sheet metal body frame, the frame comprising a horizontal base panel, a

vertical back panel, and a vertical front frame, all of sheet metal having adjoining edge portions permanently secured together, and a sheet metal oven liner unit, comprising opposed vertical side walls and a horizontal top wall, all of sheet metal permanently connected together, said side and top walls having the front edge portions permanently secured to the front frame, said side walls having the bottom edge portions permanently secured to the base panel and having the rear edge portions thereof permanently secured to the back panel, all of the parts permanently secured together being so secured before enameling, the entire chassis structure being coated with enamel on all surfaces, said enamel coating covering the portions permanently secured together so as to fill the joints between said portions and thereby seal the oven against leakage of heat and moisture through these joints.

12. In a cooking range construction, a sheet metal chassis having a sheet metal body frame, the frame comprising a horizontal base panel, a vertical back panel, and a vertical front frame, all of sheet metal having adjoining edge portions permanently secured together, and a sheet metal oven liner unit, comprising opposed vertical side walls and a horizontal top wall, all of sheet metal permanently connected together, said side and top walls having the front edge portions permanently secured to the front frame, said side walls having the bottom edge portions permanently secured to the base panel and having the rear edge portions thereof permanently secured to the back panel, all of the parts permanently secured together being so secured before enameling, the entire chassis structure being coated with enamel on all surfaces, said enamel coating covering the portions permanently secured together so as to fill the joints between said portions and thereby seal the oven against leakage of heat and moisture through these joints, the top wall of the oven liner unit having vent openings provided therein, a separate sheet metal flue panel secured to said top panel over said openings to conduct products of combustion away from said vent openings, a separate vertical sheet metal rear oven wall panel detachably secured to the chassis to form with the back panel a hollow back wall for the oven, and outer sheet metal side and top walls detachably secured to the chassis to form with the oven liner unit hollow side and top walls for said oven.

STANLEY H. HOBSON.