

Patented Mar. 25, 1913.

1,057,144.

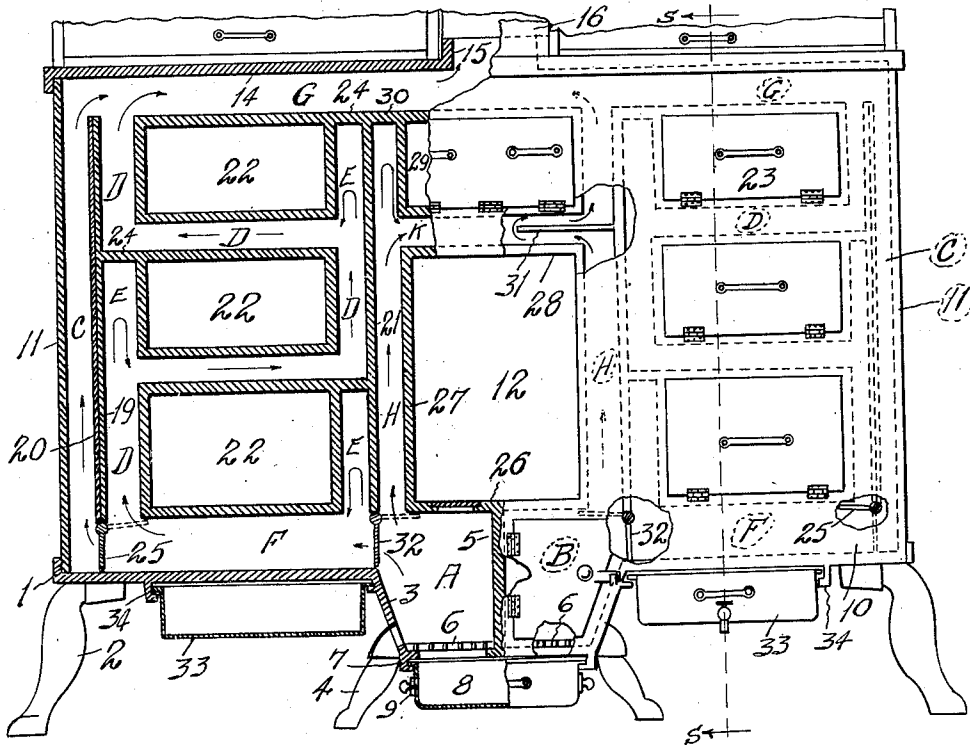


Fig. 1

Fig. 2

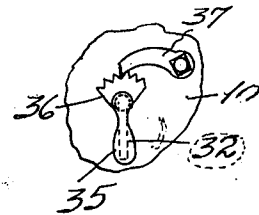
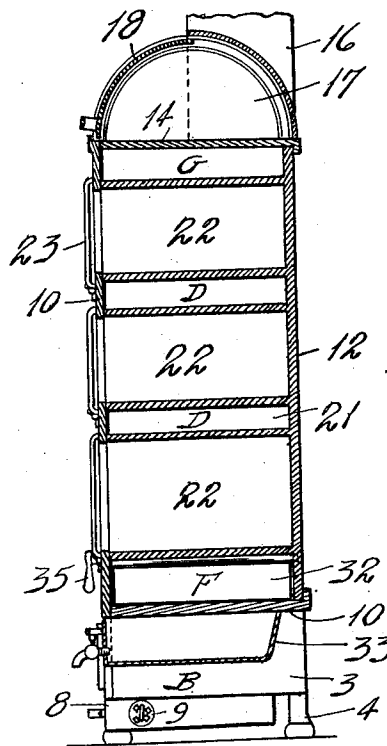


Fig. 3

WITNESSES:

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RANGE.

1,057,144.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, NEHEMIAH GUTHRIE, a citizen of the United States, residing at Womble, in the county of Montgomery and State of Arkansas, have invented certain new and useful Improvements in Ranges, of which the following is a specification.

This invention relates to improvements in cooking ranges.

The object of the invention is to provide a range having two separate fire boxes and divided whereby the products of combustion from each fire box may be separately controlled and directed.

Another feature includes a plurality of ovens and passages and flues and dampers whereby the products of combustion may be conducted in a circuitous path about the ovens or conveyed around the ovens without delivering heat to the same.

Among other features are; the provision of an ash drawer serving both fire boxes; water drawers mounted adjacent the fire boxes; damper adjusters; and warming hoods at the top of the range.

A still further object of the invention is to provide a range that will be strong, durable, efficient, and simple and comparatively inexpensive to construct, also one in which the several parts will not be likely to get out of working order.

With the above and other objects in view the invention has relation to certain novel features of construction and operation, an example of which is described in the following specification and illustrated in the accompanying drawings, wherein:

Figure 1 is a front view of the range, a portion being in section and a portion in elevation; Fig. 2 is a transverse vertical sectional view on the line s-s of Fig. 1, and Fig. 3 is a detail of one of the damper adjusters.

In the drawings the numeral 1 designates a horizontal base frame supported at its corners upon legs 2. At the central portion of the frame a fire box casting 3 depends from the same and extends from front to rear of the range, the frame being open over the said casting. The fire box casting is supported on legs 4 which also support the central portion of the range. The casting 3 is divided by a central transverse wall 5 into two fire boxes A and B respectively. At

the bottom of each fire box a suitable grate 6 is arranged. On the bottom at each side of the casting 3 hangers 7 are provided to receive the flanges of an ash drawer 8 which extends under both fire boxes. This drawer may be pulled outward and entirely removed and obviates the use of the ordinary ash pan which fits in the usual ash box. On each side of the ash drawer draft regulators 9 are placed. A face frame 10 is secured to the base frame and casting 3 and forms the front of the stove or range. End walls 11 and a rear wall 12 are mounted on the base frame and have their upper ends terminating flush with the upper end of the face frame so that all of said parts may fit in and under a cap plate 14. At the center of the cap plate a collar 15 is disposed to receive an escape pipe 16. Above the cap plate a pair of warming hoods 17 having closures 18 are provided. Near each end wall 11 a vertical transverse wall 19 having a facing of insulating material 20, is provided. These walls 19 terminate short of the base frame and the cap plate. As the construction of one side of the range is substantially the same as the other a description of one will suffice for both. Between the wall 19 and the end wall a vertical transverse flue C is formed. Near the center of the range a vertical transverse wall 21 is arranged and has its upper and lower edges flush with those of the wall 19. Between the walls 19 and 21 a plurality of superposed ovens 22 are provided and which extend from the rear wall 12 to the face frame. The face frame has openings covered by oven doors 23 registering with the ovens. The upper oven has its top flush with the top edges of the walls 19 and 21; while the lower oven has its bottom flush with the lower ends of the said walls. The ovens are located so as to provide horizontal spaces therebetween and vertical spaces between themselves and the walls 19 and 21. Certain of these spaces designated by the letter D form a continuous circuitous flue having its entrance between the bottom oven and the wall 19 and its outlet between the top oven and the top of the wall 19. At one side of each oven a short vertical blind flue E is provided by closing the upper end thereof with a horizontal plate 24. These blind flues are positioned in staggered relation and

form pockets into which a certain portion of the heat is delivered as the products of combustion pass through the flue D.

Between the bottom oven and the base frame a horizontal flue F is formed and which leads from one of the fire boxes to the flues C and D. At the lower end of the wall 19 a transverse depending damper 25 is mounted. When this damper is swung down to a vertical position the products of combustion cannot enter the flue C but must pass upward through the flue D and thus about the ovens whereby the latter are heated. When the said damper is swung upward to a horizontal position against the bottom of the lower oven the flue D is obstructed so that the products of combustion must pass into and up through the flue C, thereby supplying substantially no heat to the ovens. At the upper portion of the range a horizontal flue G into which the flues C and D empty, is provided. This flue communicates with the pipe 16.

Over the fire boxes a plate 26 is arranged substantially on a level with the bottoms of the lower ovens. Above the stove plate is an open space or recess surrounded by vertical walls 27 and a horizontal top wall 28, the rear wall 12 covering the rear of the recess. The walls 27 are spaced from the walls 21 so as to provide flues H therebetween. The flues are extended upward and separated by an oven 29 above the recess. One of the flues H has its upper end closed by a plate 30. A horizontal flue K between the oven 29 and the wall 28 connects the flues H. From the wall 21 forming part of the flue H opposite to that having its upper end closed, a horizontal deflecting plate 31 projects into the flue K.

Products of combustion from the fire box A will pass up the flue H at the left with relation to Fig. 1; while the products from the fire box B will pass up the flue H at the right. The products passing up the left flue will pass through the flue K where they will meet and mix with the products from the right flue, the plate 31 causing the products rising in the right flue to pass under said plate into the flue K, mix with the other products and pass over said plate to the upper portion of the right flue which discharges into the flue G. In this way the oven 29 is thoroughly heated. When it is desired to have the products enter the flues H, dampers 32 like the dampers 25 and pivoted along the lower edges of the walls 21, are downward as shown in full lines in Fig. 1 which obstruct the flues F. If it is not desired to heat the oven 29, the dampers 32 are swung to a horizontal position as shown in dotted lines in Fig. 1 which thus obstruct the flues H and permits the products of combustion to pass into the flues F.

It is to be noted that the wall 5 between

the fire boxes extends up to and joins the stove plate 26 and thus each fire box is independent of the other although they may be used together. In some instances it may be desirable to use only the ovens 22 on one side and in which case it is only necessary to use one fire box. In other instances a more intense heat for one side than the other may be required. Beneath the base frame water drawers 33 are slidable in hangers 34 depending from said frame. These drawers are placed next to the fire boxes and close up against the under side of the base frame, thus deriving heat from the fire boxes and the flues F and obviating the use of heating coils.

All of the dampers have their bearing at the front end extended through the face frame and an adjusting handle 35 is secured to each. The handles are alined with the dampers as indicated in dotted lines in Fig. 3 so that the position of the handle will indicate the position of the damper. Each handle has a toothed segment 36 at its upper end and a dog 37 is provided for each segment, the dogs being pivoted on the face frame. By this means the dampers are held in their adjusted positions. In some instances it may be convenient or necessary to distribute the products of combustion. For example the dampers 32 may be set so that some of the products will enter the flue H and the remainder pass into the flues F; or the dampers 25 may be adjusted to divide the products between the flues C and D.

What I claim, is:

1. In a range, a base frame, a fire box depending from the base frame, an ash drawer slidably supported by the fire box, a water drawer in close proximity to the fire box depending from the base frame, superposed separated ovens supported above the base frame laterally of the fire box and having passages therebetween and at their sides in communication whereby communicating flue spaces are provided under and between the ovens, the fire box having communication with one of the spaces under the ovens, vertical side and end walls supported on the base frame, a vertical flue wall between the side walls disposed adjacent the end wall whereby a vertical flue space is provided therebetween, said vertical flue wall being located between the end wall and ovens and having its lower end terminating above the base frame, a damper mounted at the lower end of the flue wall and arranged to close against the base frame, a top wall supported over and above the ovens, the range having a horizontal space extending between the ovens and top wall and communicating with the vertical flue space, and an escape pipe extending from an opening in the top wall.

2. In a range, a base frame having sup-

porting legs, two fire boxes depending in contact from the central portion of the base frame, a stove plate above the fire boxes, said fire boxes being separated from each other by a vertical wall extending to the stove plate, side walls and a top wall forming a recess over the stove plate, an oven over the top wall of the recess, vertical flue walls adjacent the side walls of the recess whereby vertical flue spaces are provided between said vertical flue walls and side walls, said vertical flue spaces having their lower ends open and over the fire boxes and leading therefrom, a deflector extending between the oven and the top wall of the recess, the range having a space over the oven communicating with one of the flue spaces, and an escape pipe located above the oven communicating with the space over the oven.

3. In a range, a base frame, a stove plate above the base frame, fire boxes supported from the frame and separated by a vertical wall extending to the stove plate, an ash drawer under the fire boxes, walls 27 extending vertically from the stove plate, a wall 28 connecting the walls 27 whereby a recess is provided over the stove plate, an oven 29 above the wall 28, vertical flue walls 21 adjacent the walls 27 and the oven 29 whereby vertical flue spaces H extending from the fire boxes are provided, a closure at the upper end of one of the flue spaces H, there being a communicating space K

extending from one flue space H to the other between the oven 29 and the wall 28, vertical flue walls 19 extending from points above the base frame, vertical end walls 11 adjacent the walls 19 whereby vertical flue spaces C are provided therebetween, superposed ovens 22 arranged above the base frame and between the walls 19 and 21 at each side of the range, there being lateral spaces F between the base frame and the ovens 22 communicating with the fire boxes and the flue spaces C, dampers 32 mounted at the lower ends of the walls 21 arranged to close either the lower ends of the flue spaces H or the inner ends of the flue spaces F, dampers 25 at the lower ends of the walls 19 arranged to close the lower ends of the flue spaces C from the spaces F, a rear wall 12 mounted on the base frame and extending between the end walls 11, a face frame 10 opposite the rear wall, and a cap plate resting on the end and rear walls and the face frame provided with an escape opening, there being a horizontal space G between the cap plate and the ovens having communication with the flue spaces C and one of the flue spaces H.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

NEHEMIAH GUTHRIE.

Witnesses:

W. S. CASTLE,

JACK A. SCHLEY.