

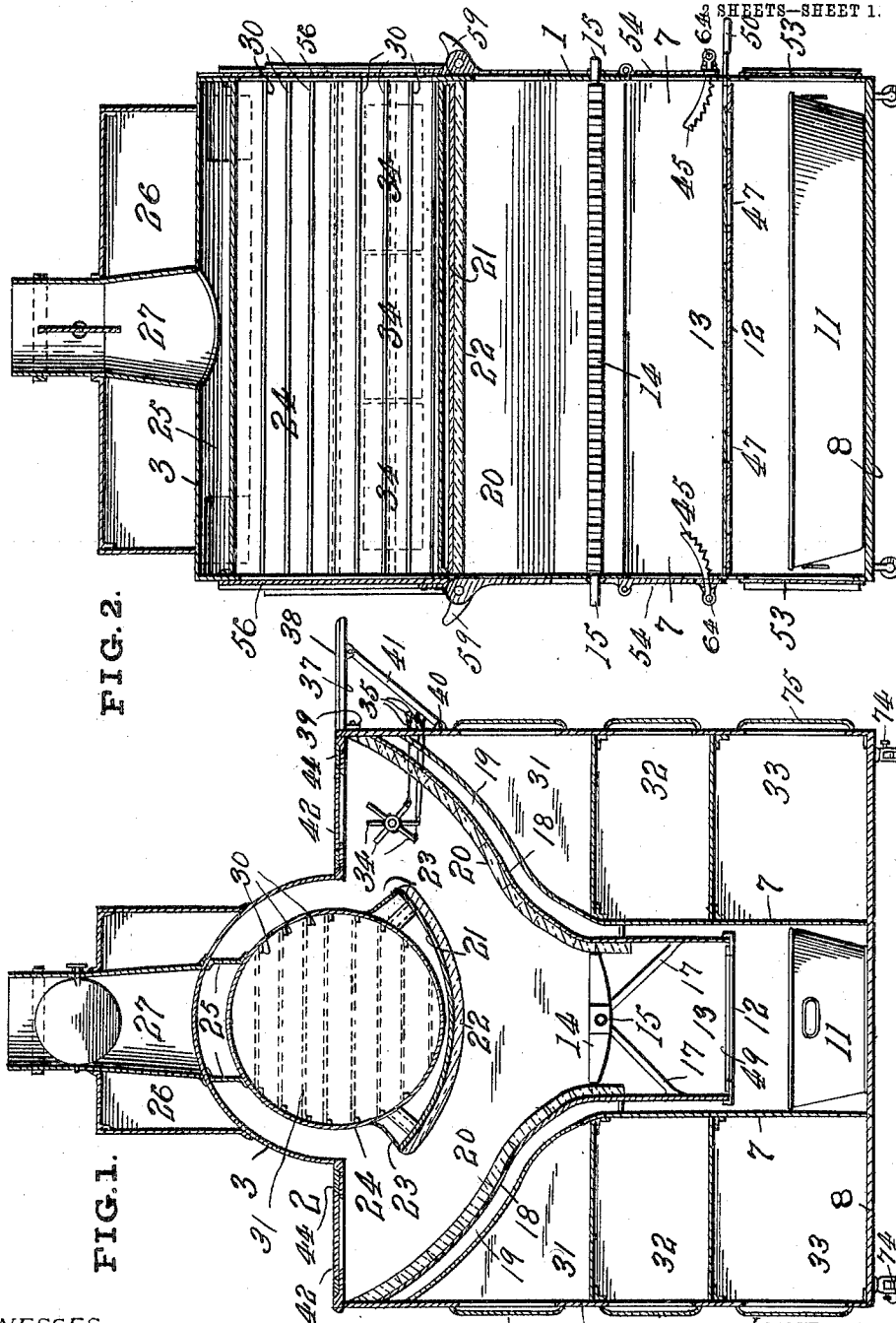
No. 821,487.

PATENTED MAY 22, 1906.

M. V. HAMMACK.
COOKING RANGE.

APPLICATION FILED DEC. 17, 1902. RENEWED OCT. 31, 1905.

SHEETS-SHEET 1.



WITNESSES:

Chas. K. Davies.
No. E. Moore.

INVENTOR
Martin V. Hammack.
BY *[Signature]* Attorney

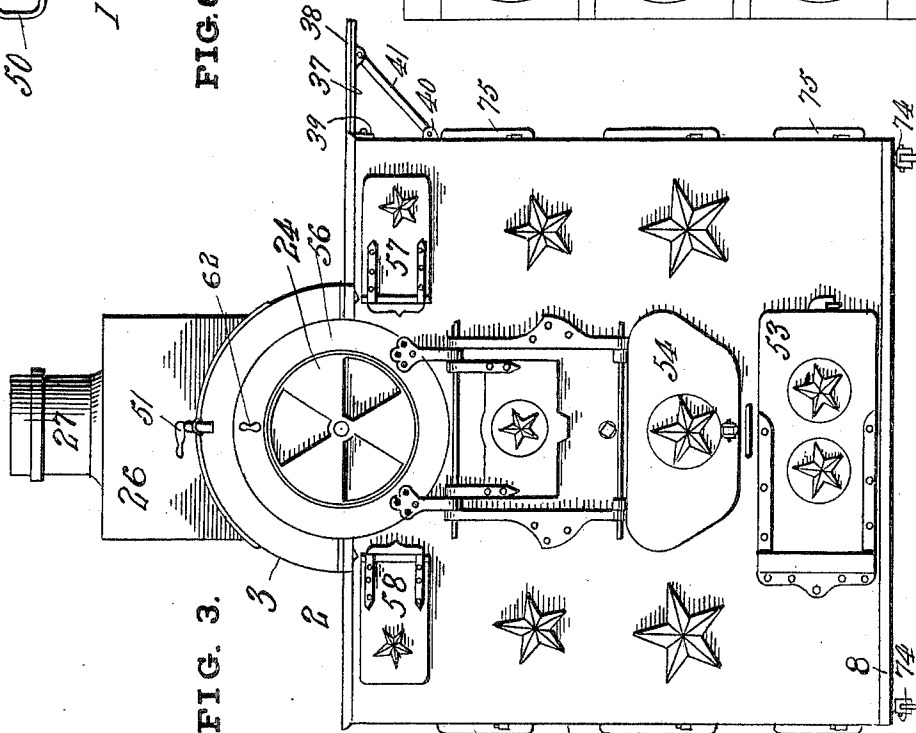
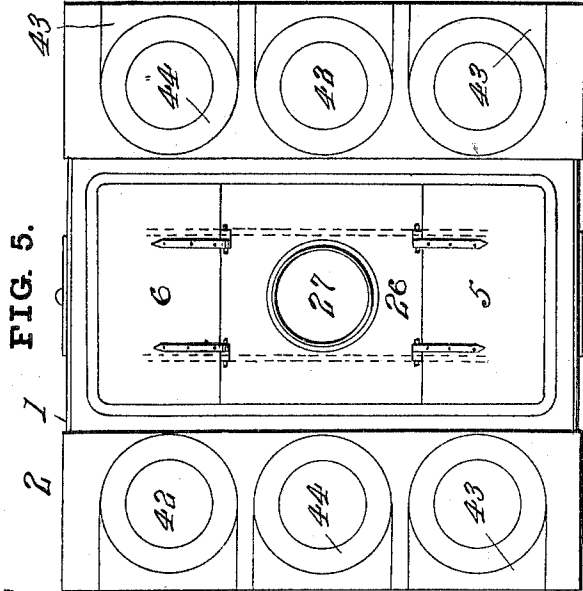
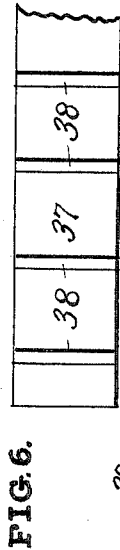
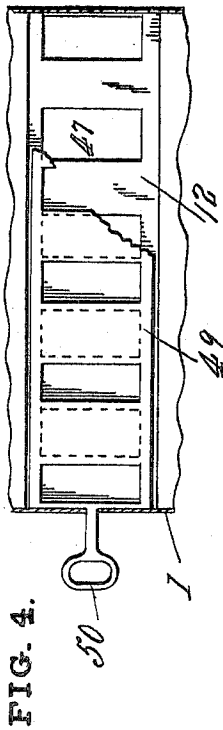
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2 SHEETS—SHEET 2.



WITNESSES:

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M. V. Hammack,
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UNITED STATES PATENT OFFICE.

MARTIN V. HAMMACK, OF JACKSONDALE, VIRGINIA.

COOKING-RANGE.

No. 821,487.

Specification of Letters Patent.

Patented Mar 22, 1906.

Application filed December 17, 1902. Renewed October 31, 1905. Serial No. 285,349.

To all whom it may concern:

Be it known that I, MARTIN V. HAMMACK, a citizen of the United States, residing at Jacksondale, in the county of Princess Anne and State of Virginia, have invented certain new and useful Improvements in Cooking-Ranges, of which the following is a specification.

My invention relates to improvements in cooking-ranges, and has for its object the provision of an apparatus in which the various cooking operations of baking, roasting, boiling, broiling, frying, and steaming may be conveniently and economically accomplished and combined with those of warming articles of food or plates and heating water either simultaneously or separately, and in particular to provide an equal distribution of heat throughout the length of the ovens and apertures in the top of the range and means for regulating the intensity of the heat in the different portions of the apparatus. In order to accomplish this, I provide a grate on which the combustible is burned, resistant linings and shields to regulate the radiation of the heat, dampers to constrain and regulate the flow of the heated gases generated, baffles to cause the even distribution of the gases, a circular oven around which the gases are constrained to circulate, warming-ovens disposed at the sides of the combustion-chamber, and suitable apertures in the top of the range to accommodate the various pots, pans, &c., used in boiling, broiling, frying, and the like. Moreover, I provide a receptacle for water in certain of the forms in which I may make my invention, although this does not occur in all of the forms.

Having thus enumerated some of the functions of my invention, in order to make clear its various features I will proceed to describe it in detail, reference being had to the drawings which accompany this specification and form a part thereof, and in which—

Figure 1 is a transverse sectional elevation taken at the middle of the length of the range. Fig. 2 is a longitudinal sectional elevation through the center of the grate and oven, &c. Fig. 3 is an end elevation. Fig. 4 is a horizontal section taken just below the level of the grate and showing the construction of the ash-dumper, and Fig. 5 is a plan view of the top of the stove with the covers in place. Fig. 6 is a top view of the leaf or table.

As shown in Fig. 1, the main body of the apparatus consists of an outer shell 1, con-

structed of metal and preferably arranged in a number of sections for convenience in construction and transportation, a base 8, also of metal, a flat top 2, provided with holes to accommodate pots and pans, &c., and a cylindrical dome 3, carrying the smoke-pipe. The grate 14 consists of a central shaft with fingers or ribs attached thereto, the whole forming one casting preferably and two end spindles 15 with squared or hexagonal ends. The grate, being supported at the ends by the spindles 15 and in the center or at two or more intermediate points by the struts 17, is capable of being rocked by means of a crank fitted detachably to the ends of the spindles 15, the ashes and clinkers being thus forced down into the ash-pit 13 onto the dumping-plate 12. This plate has in it a number of apertures and has fitted over it a sliding plate 49, which is provided with corresponding apertures and a handle 50 at either end. By pulling the sliding plate back and forth by means of the handle the ashes are dumped through the apertures 47 into the ash-box 11, which may then be withdrawn through the door 53 and emptied. The operation of dumping the ashes being completed, the sliding plate is made to traverse the dumping-plate 12 until the solid portions of the former are over the apertures in the latter. Cold air is thus prevented from entering the ash-pit 13. A small or a large amount of air may, however, be admitted at will through these apertures.

The dumping-plate and the struts 17 are supported by the sides of the fire-box 18, which are in turn supported by and secured to the shell 1. A refractory lining 20 covers the sides of the fire-box, protects them from the action of the extreme heat, and prevents excessive radiation of the heat. As an additional protection against excessive radiation an air-space 19 is provided between the sides of the fire-box and those of the warming-ovens. The plates 7 form one side of the warming-ovens 31 32 33, which may be divided up, as shown, or into any suitable number of compartments.

The oven 24, which is circular or approximately circular in outline, is preferably constructed of metal and is supported by attachments to the ends of the casing 1. Attached to the lower side of the oven is a shield-plate 21, which is protected from the extreme heat of the fire by the resistant and non-conducting covering 22. Baffles at 23 prevent the

accumulation of soot or coal between the shield and the oven and also direct the course of the gases and prevent eddies. Between the top of the oven and the dome 3 are two
 5 baffles 25, running nearly the whole length of the oven. These serve to constrain the gases to traverse the oven, and thus secure an even distribution of heat.

As previously described, the flat top 2 is
 10 provided with circular openings, which are fitted with portable covers made either solid or fitted as a series of annular rings. The coal is fed to the fire either through these openings or through the doors 57 58, which
 15 are located at either end of the range. For the purpose of kindling the fire a door is interposed at the front, as seen in Fig. 3. Abreast of the top and on either side is fitted a leaf or table 37, which is supported by means of the
 20 lugs 39 and 40 and the struts 41. Located transversely of the leaf or table 37, on its upper surface, are the tracks 38, their upper surfaces flush with the top of the stove, the main body of 37 being depressed somewhat
 25 below this level. When it is desired to remove a heavy pot from the hole and onto the table 37, the auxiliary cover 43 is removed, and the pot may then be slid out onto the tracks, the bottom of the pot clearing the table.
 30 The auxiliary cover being replaced, the circular cover may be put into position.

The interior of the oven is provided with a number of ledges 30, disposed longitudinally, on which may be laid any desired number of
 35 shelves. Access to the oven is provided by doors at the ends 56, secured by latches 62 and hinged, as shown in Fig. 3. In each of these doors is fitted a louver for the purpose of inspection or regulation of the heat by the
 40 admission of cold air. Lugs 59 limit the angular motion of the doors 56. One of the most important advantages of this form of oven lies in the fact that owing to its sloping sides it is impossible for soot to accumulate
 45 thereon. This feature in flat-topped ovens is one of the greatest sources of loss of heat, since a layer of soot forms a non-conductor and effectually prevents the heat of the flue-gases from entering the ovens.

As a means of regulating the flow of the gases and directing the heat against or away from the covers 42 44 the damper 34 is provided. This damper is pivoted on and is capable of rotation about a longitudinal axis, as
 55 shown, its angular position being regulated by the rods 35. The damper is preferably made in several sections, so that the heat-supply to each of the covers may be separately regulated, as indicated in the drawings,
 60 where the three dampers are shown on one rotatable rod.

As I have shown it in the drawings, there is a water-tank 26 fitted to the dome 3 around the smoke-pipe 27. This tank is in-
 65 tended for use mainly where there is no wa-

ter-pressure available, and in that case I prefer to fit the top of the tank in the form shown in Fig. 5 with the top hinged in sections 5 and 6. However, the tank may still be used where the house is piped, although in many
 70 cases it will be advisable to fit a water-back, as usual. For the case first described a faucet 51 is provided to draw off the water as desired.

For convenience in moving the range for
 75 the purpose of cleaning, &c., a set of casters is provided, as shown, and in order to prevent the accidental shifting of the range when in its proper position set-screws 74 are provided for each of the casters.
 80

Access to the warming-ovens is provided by hinged doors 75 at the sides.

The air-supply for the combustion of the fuel is admitted through the door 54, and by means of the toothed arc 45, pivoted to the
 85 door by the pin 64, the door may be propped open at any desired position and a fine regulation of draft secured.

I do not wish to confine my invention to the specific form and relationship of parts as
 90 shown and described, but reserve the right to modify form, materials, dimensions, and proportions to suit conditions to be met, provided I do not alter any of the essential fea-
 95 tures, functions, or combinations of either as described.

I am aware that ranges have been constructed and many patented in which a number of the minor features shown and described herein have been used, and I do not
 100 claim, broadly, a new type of cooking apparatus.

What I do claim, however, and desire to secure by Letters Patent, is—

1. A cooking-range having a centrally-dis-
 105 posed fire-chamber, a series of compartments upon opposite sides of said fire-chamber forming warming-ovens with a space between said fire-chamber and warming-ovens, and a substantially circular oven disposed centrally
 110 above the fire-chamber and a water-tank above said oven, and a shield-plate secured to the lower portion of said oven, substantially as described.

2. A cooking-range having a centrally-dis-
 115 posed fire-chamber, a series of compartments upon opposite sides of said fire-chamber forming warming-ovens with a space between said fire-chamber and warming-ovens, a substantially circular oven disposed centrally
 120 above the fire-chamber and a water-tank above said oven, and a shield-plate secured to the lower portion of said oven and a shield-plate beneath said circular oven.

3. A cooking-range having a centrally-dis-
 125 posed fire-chamber, a series of compartments upon opposite sides of said fire-chamber forming warming-ovens with a space between said fire-chamber and warming-ovens, a substantially circular oven disposed centrally
 130

above the fire-chamber, a shield-plate beneath said circular oven, and baffles interposed between said shield and oven.

4. A cooking-range having a centrally-disposed fire-chamber, a series of compartments upon opposite sides of said fire-chamber forming warming-ovens with a space between said fire-chamber and warming-ovens, a substantially circular oven disposed centrally above the fire-chamber, a shield-plate beneath said circular oven, baffles interposed between said shield and oven, a tank above said circular oven, and baffles between said tank and top of the oven and extending nearly the whole length of the latter.

5. A cooking-range having a centrally-disposed fire-chamber, a series of compartments upon opposite sides of said fire-chamber forming warming-ovens with a space between said fire-chambers and warming-ovens, a substantially circular oven disposed centrally above the fire-chamber, a shield-plate beneath said circular oven, baffles interposed between said shield and oven, a tank above said circular oven, baffles between said tank and the top of the oven and extending nearly the whole length of the latter, and a rotatable damper in the space adjacent the circular oven for regulating the flow of gases and directing the heat against or away from covers in the top of the range.

6. A cooking-range having a centrally-disposed fire-chamber, a series of compartments upon opposite sides of said fire-chamber forming warming-ovens with a space between said fire-chamber and warming-ovens, a substantially circular oven disposed centrally above the fire-chamber, a shield-plate beneath said circular oven, baffles interposed between said shield and oven, a tank above said circular oven, baffles between said tank and top of the oven and extending nearly the whole length of the latter, a smoke-pipe

above the oven, said tank surrounding said smoke-pipe.

7. A cooking-range having a centrally-disposed fire-chamber, a series of compartments upon opposite sides of said fire-chamber forming warming-ovens with a space between said fire-chamber and warming-ovens, a substantially circular oven disposed centrally above the fire-chamber, a shield-plate beneath said circular oven, baffles interposed between said shield and oven, a tank above said circular oven, baffles between said tank and top of the oven and extending nearly the whole length of the latter, a refractory lining on the curved sides of the fire-box, and a non-conducting covering on the under side of said shield-plate.

8. In a cooking-range, the combination with the shell having holes in its top, the centrally-disposed oven, the tank above said oven, the shield-plate for the oven, the central fire-chamber, the warming-ovens on each side of the fire-chamber, a leaf supported abreast of the top, tracks disposed transversely of said leaf on its upper surface with their upper surfaces flush with the top of the stove, the top being provided with tracks or runways communicating with those of the leaf.

9. A cooking-range consisting of a fire-chamber, a series of warming-compartments, a circular oven arranged adjacent to the fire-chamber, a shield-plate on the lower side of the oven, a top portion adjacent to the oven and in communication with the fire-chamber, a smoke-pipe, and a water-tank above the oven and surrounding the smoke-pipe.

In testimony whereof I affix my signature in presence of two witnesses.

MARTIN V. HAMMACK.

Witnesses:

WILLIAM B. WATSON,
Mrs. H. M. O'SHIELDS.