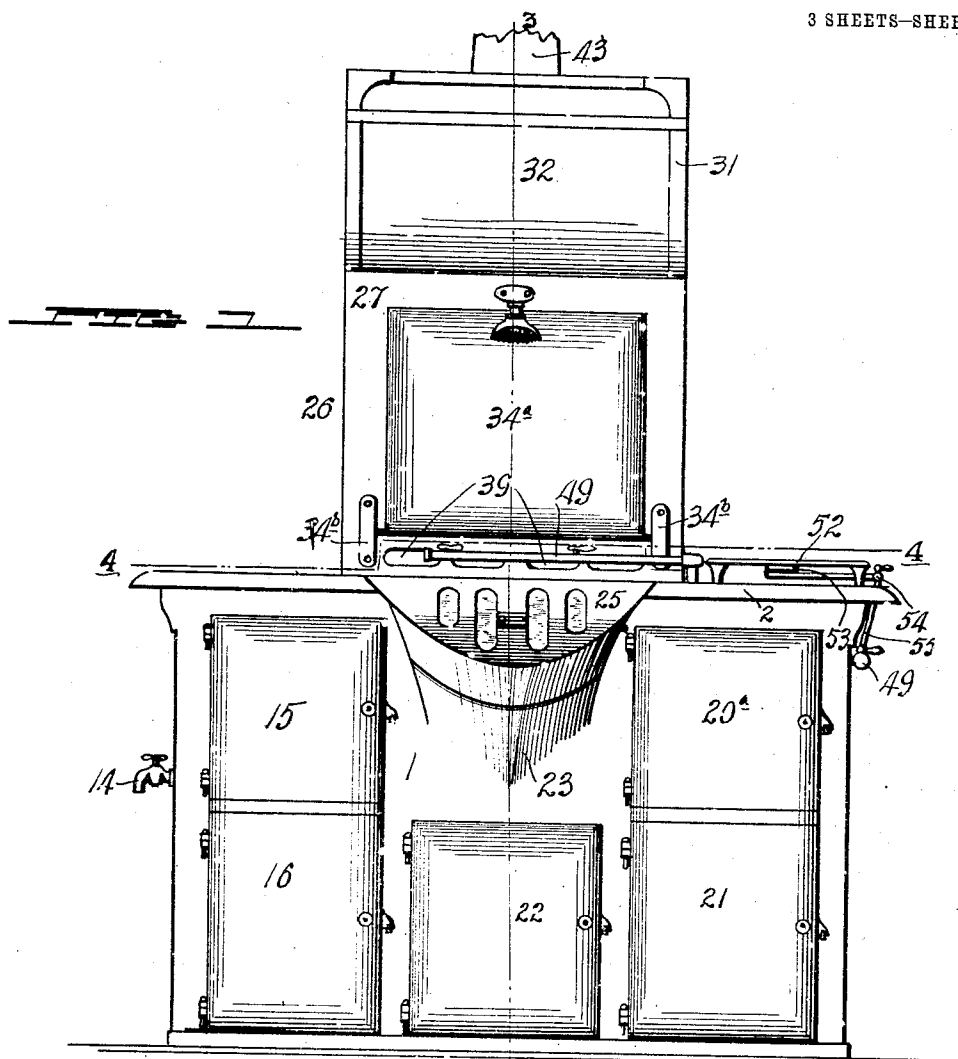


C. M. GENTHNER.
 COOK STOVE OR RANGE.
 APPLICATION FILED JULY 25, 1910.

1,039,511.

Patented Sept. 24, 1912.

3 SHEETS-SHEET 1.



Witnesses
 Robert Plow

[Signature]

Inventor

Charles M. Genthner

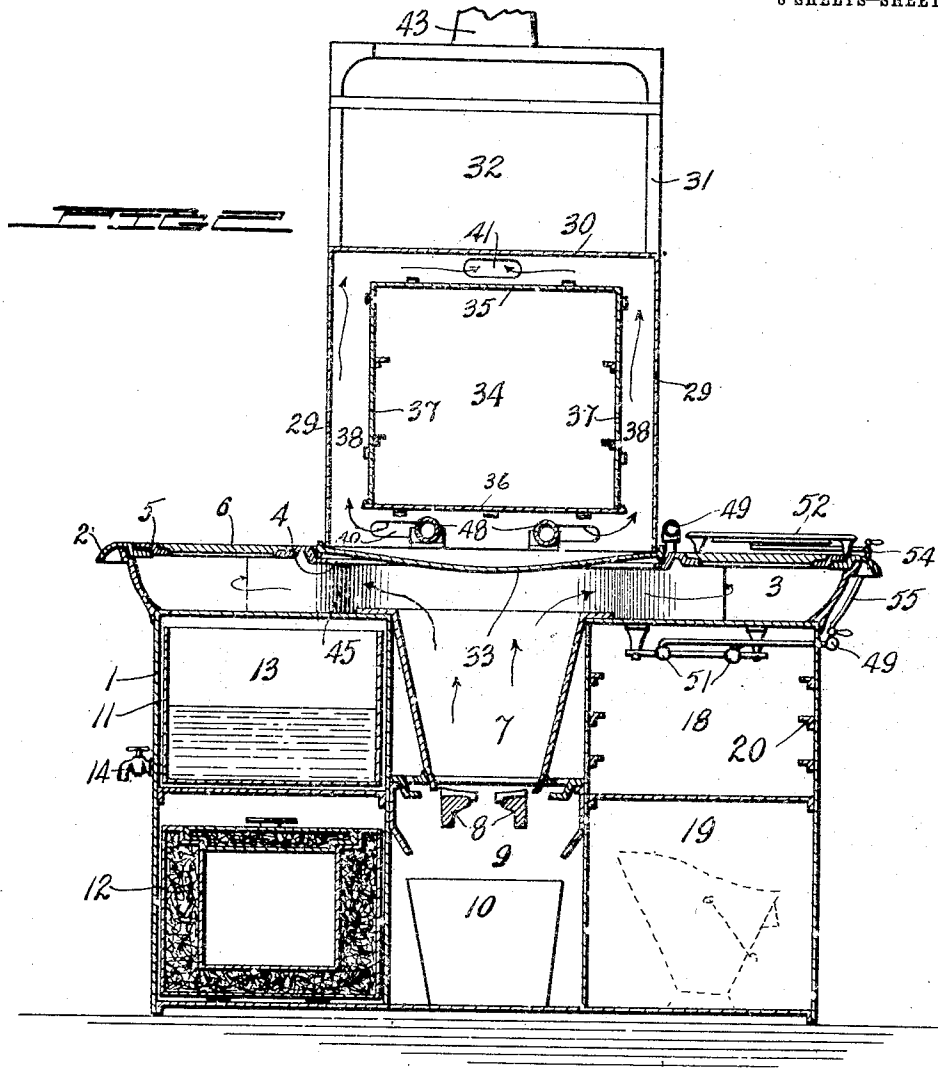
By *[Signature]*

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Witnesses
 Robert Flourens

Flourens

Inventor

Charles M. Genthner

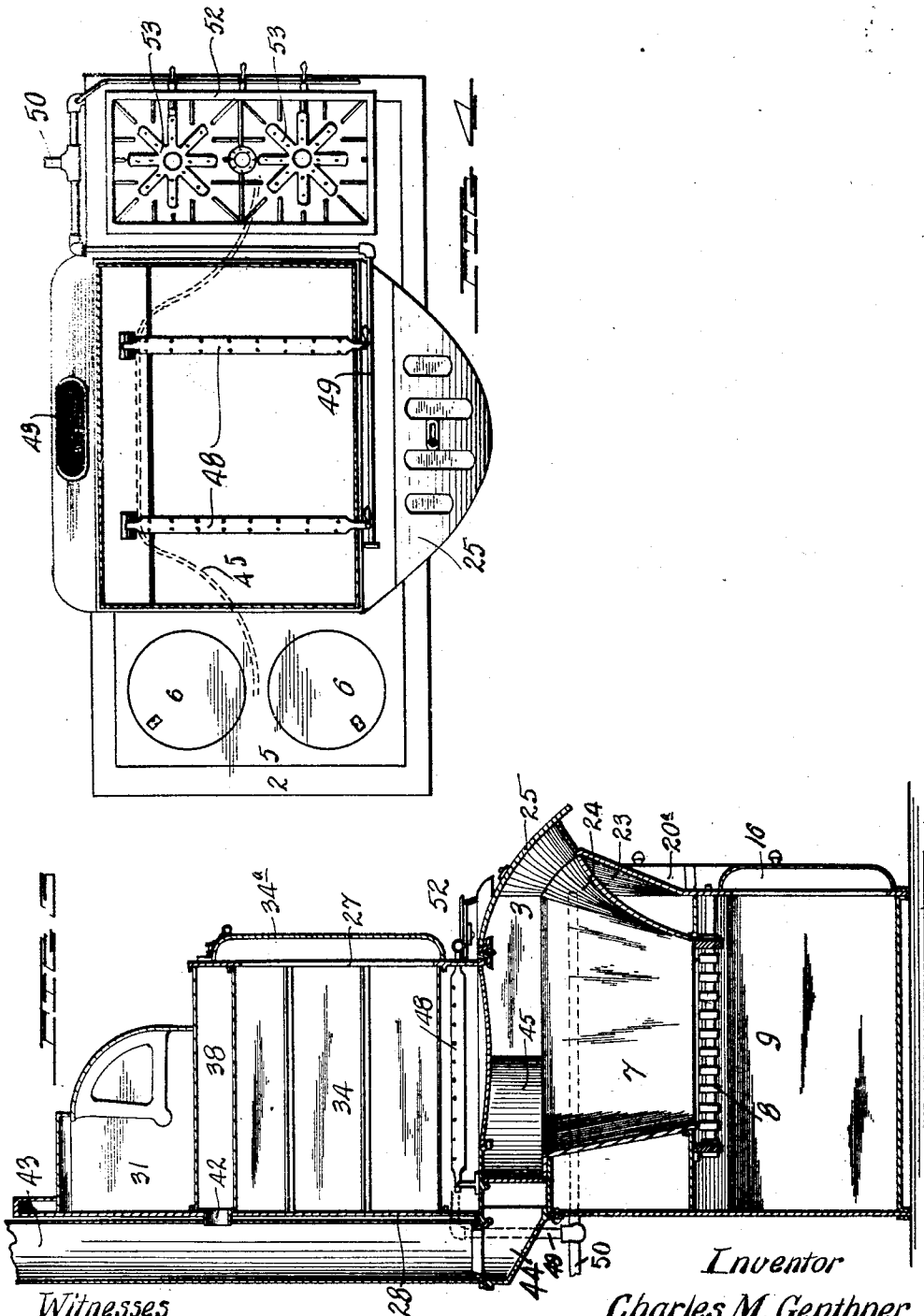
By *Chas. M. La Porte*
 Atty.

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Witnesses
 Robert Flows

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Att'y

UNITED STATES PATENT OFFICE.

CHARLES M. GENTHNER OF PEORIA, ILLINOIS, ASSIGNOR TO CULTER & PROCTOR STOVE CO., OF PEORIA, ILLINOIS. A CORPORATION OF ILLINOIS.

COOK STOVE OR RANGE.

1,039,511.

Specification of Letters Patent.

Patented Sept. 24, 1912.

Original application filed May 28, 1910, Serial No. 563,955. Divided and this application filed July 25, 1910. Serial No. 573,823.

To all whom it may concern:

Be it known that I, CHARLES M. GENTHNER, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Cook Stoves or Ranges, of which the following is a specification.

This invention has reference to cooking stoves or ranges, having for its principal object a fire-pot arranged centrally with respect to the ends of the stove, on one side of which is arranged a reservoir and what is commonly called a "fireless cooker," and on the opposite side a compartment or broiling chamber and a receptacle receiving compartment, and an oven located immediately above or in proximity to the fire-pot; a baffle-plate being located between the top of the fire-pot and bottom of the oven to protect the oven bottom.

This invention has for a further object a cooking stove or range provided with a fire-pot for burning suitable fuel and an oven located above and within a short distance of the fire-pot, the bottom of the oven being protected by a baffle-plate disposed at a suitable distance below the oven bottom; in combination with gas fittings and burners, whereby gas may be used instead of other fuel as a heating medium; the gas burner for the oven being preferably disposed in the space between the bottom of the oven and the baffle-plate, which arrangement also protects the gas burners from becoming clogged when fuel is used in the fire-pot.

With the above and many other objects in view the invention consists in providing a cook stove or range with an elevated oven, which is to say that the oven is placed on what would ordinarily be the top of the stove and locating the fire-pot just below the same. This arrangement makes it possible to provide "end top" plates on opposite sides of the oven and provide the body of the range proper with compartments which may have varying uses. The bottom of the oven is spaced above the fire-pot and separated

by a baffle-plate and between the baffle-plate and oven bottom is an air circulating space 50 connecting with similar air circulating spaces on the sides and top of the oven, which also connect with a flue at the rear of the range. The products of combustion from the fire-pot are deflected to and beneath the "end top" plates by a preferably sinuous shaped flue strip around which such products of combustion must travel to the flue.

In the practical application of the invention it will, of course, be understood that changes in structural arrangements and details may be resorted to, but a preferred embodiment of the invention is shown in the accompanying drawings, in which:—

Figure 1 is a front elevation of a range or stove embodying my improvements; Fig. 2 is a vertical longitudinal section through the range, the extreme upper portion shown in elevation; Fig. 3 is a cross-section on the line 3—3 of Fig. 1, and Fig. 4 is a cross-section on the line 4—4 of Fig. 1.

This application is a division of the application filed by me on May 28th 1910, bearing Serial No. 563,955.

Like numerals of reference indicate corresponding parts throughout the figures.

1 designates the casing of the main body portion of my improved stove or range, which is preferably constructed of steel plate and rectangular in form. The top 2 is preferably spaced a suitable distance from the top of the fire-pot and compartments on either side thereof, forming a chamber 3 for the travel of the products of combustion from the fire-pot. The top is provided with an enlarged centrally disposed rectangular opening 4 and with the oppositely disposed removable "end top" plates 5 and associated removable lids 6.

The fire-pot 7 is located centrally of the range, with respect to its end walls, as seen in Fig. 2, beneath which are the usual grate bars 8 and below the grate bars the ash box 9 and removable ash pan 10. On one side of the fire-pot and ash box, preferably the

left hand end of the range looking at Fig. 2; are provided a reservoir 11 and a lower compartment 12 to be used as a "fireless cooker," although the "cooker" proper is separate from the compartment and may be of any well known or approved construction. The reservoir contains a receptacle 13 for holding water, and a faucet 14 is suitably connected with said receptacle. Both the reservoir 11 and the compartment 12 are provided with hinged doors 15 and 16, see Fig. 1. At the other end of the range and on the opposite side of the fire-pot and ash box are arranged compartments 18 and 19, similar to the reservoir 11 and compartment 12. The compartment 18 is adapted to be used as a heating chamber, being provided with cleats 20 secured to the opposite walls of said chamber to receive and hold suitable shelving or plates; however, it is intended to use this chamber as a broiler, the appliances to go in the compartment being hereinafter more fully described in detail.

The compartment 19 is preferably used merely as a receptacle to hold pots or pans or a coal-hod, as shown in dotted lines in Fig. 2. The compartments 18 and 19 each have hinged doors 20^a and 21 similar to doors 15 and 16, and 22 is a hinged door for the ash box 9.

The front wall of the range where it coincides with the fire-pot has the flared or semi-funnel shaped portion 23 and likewise the front wall of the fire-pot has a similar wall 24, see Fig. 3, and the upper end of the semi-funnel or flared portion 23 of the front of the range is covered by the hinged cover or cap 25, which is preferably hinged so as to be raised and lowered whereby the fuel may be admitted to the fire-pot in an easy and convenient manner.

Located on the top of the stove or range and covering the rectangular opening 4, referred to, is the oven section 26. This section comprises front and rear walls 27 and 28, side or end walls 29 and the top 30 supporting a warming oven 31 provided with a pivoted or hinged gate 32. The bottom wall of the oven section I shall refer to as the baffle-plate 33 which is dished, its convex wall projecting in the direction of the fire-pot, and having its greatest depth centrally of and above the top of the fire-pot and within the chamber 3. The function of this baffle-plate is to separate and cause the products of combustion to be directed toward the opposite ends of the range and circulated beneath the "end top" plates, as shown by the arrows in Fig. 2; also to protect the oven bottom, as will become apparent. The oven proper is designated as 34 formed by the top and bottom walls 35 and 36 and the side walls 37, within the oven casing, see Fig. 2, so spaced and arranged with respect to the top and

side walls of the oven casing and its baffle-plate as to provide an air circulating chamber 38 entirely around the oven and connecting with air inlet openings 39 in the front wall 27 of the oven casing just above the top of the range proper, and also air inlet openings 40 in the rear wall 28 of the oven casing. Said chamber 38 further opens into or connects with an opening 41 in the rear wall 28 of the oven casing just beneath the top 30 in which a nipple 42 is secured, see Fig. 3, which leads into the upright flue or pipe 43. This pipe or flue 43 receives the products of combustion from the fire-pot 7 and the chamber 3, connecting as it does with a nipple or elbow 44 attached to the rear wall of the range proper; just below its top and connecting with the chamber 3. It will be observed that by placing the bottom 36 of the oven proper above the baffle-plate 33 that it is protected and also leaves sufficient space for the location of gas burners to be used in lieu of the fuel in the fire-pot. The baffle-plate also protects the burners from becoming clogged and keeps them free from contact with the products of combustion. Air entering the openings 39 and 40 in the front and rear walls of the oven casing, beneath the oven proper has a free circulation around the oven and uniformly heats the oven. The gas burners for the oven, will be further described.

To further insure a uniform distribution of the products of combustion from the fire-pot 7 beneath the "end tops" 5, I provide a flue strip 45, having a sinuous formation, preferably of the shape shown in Fig. 4. This flue strip is located in the chamber 3, its main portion following the upper portion of the rear wall of the fire-pot 7 and having its ends bent forwardly and toward the sides of the range terminating approximately centrally beneath the "end top" plates 5, see Fig. 4. It will thus be observed that the products of combustion rising out of the fire-pot will be deflected laterally in opposite directions by the baffle-plate 33 and will travel to the opposite ends of the flue strip beneath the front portions of the "end tops" 5, around the flue strip 45 and beneath the rear portions of the "end tops," to and out of the flue or pipe 43. If the circulation be too free it may be checked by a damper placed in the flue or pipe 43, not shown. Such a damper is old and well known and it has not been thought necessary to show the same.

The oven casing has an oven door 34^a connecting with the oven proper 34. This door is preferably hinged at its lower opposite sides, as at 34^b so that the door upon being opened is lowered. With the front of the oven casing brought close to the front edge of the range, the lowering of the door above the opening or covering for the fire-pot pro-

protects the person using the oven from the heat rising or radiating from the fire-pot.

Referring now to the gas attachments referred to, 48 denotes gas burners suitably arranged in the chamber 38 of the oven casing beneath the bottom of the oven proper and above the baffle-plate 33; the chamber 38 making it possible to use the same not only as an air circulating chamber when fuel is used in the fire-pot, but also for heat producing instrumentalities, such as gas or other means. As previously stated, this location and arrangement of the gas burners will not interfere with the use of fuel in the fire-pot 7, when it is desired to use fuel and not gas, and being separated from the products of combustion, there is no danger of clogging the burners 48 or interfering with the same. The burners 48 have valve connections with a manifold pipe 41 and said manifold is connected with a supply pipe 50.

Suitably supported in the compartment 18 near the top thereof, see Fig. 2 are burners 51 which have a suitable valve connection with the manifold 49. The burners 51 in compartment 18 make it possible to use the compartment as a broiler, as will be understood.

52 denotes, what is known as a "hot-plate," being provided with the usual burners 53, and as many others as may be desired, and said burners have a valve connection with a supply 54.

I prefer that the "hot-plate" be removable and adapted to rest on the range proper above one of the "end-tops" and its lids, as shown in Figs. 1 and 2, and to connect the burners of the "hot-plate" with the supply, it is provided that a suitable coupling 55, a hose if desirable, may be attached to the pipe and the manifold 49.

With the foregoing arrangement of the stove or range with the gas burners and "hot-plate," I provide a range easily convertible from a gas range to a fuel range and vice-versa.

What I claim is:—

1. In a stove, in combination, a fire-pot, an oven casing mounted on the top of the stove immediately above the fire-pot, the lower wall of said casing being dished and serving as a baffle-plate, the bottom of the oven proper being spaced above the baffle-plate forming an interposed air circulating space, a flue-strip for directing the products of combustion to the opposite ends of the stove, burners disposed within the oven casing above the baffle-plate and below the bottom of the oven proper, and a gas supply pipe connected with said burners.

2. In a stove, in combination, a fire-pot, an oven casing mounted on the top of the stove immediately above the fire-pot, the

lower wall of said casing being dished and serving as a baffle-plate, the bottom of the oven proper being spaced above the baffle-plate forming an interposed air circulating space, compartments disposed upon opposite sides of the said fire-pot, "end top" plates disposed in the top of the stove on opposite sides of the oven casing and supporting removable lids, a flue strip having a sinuous shape and its opposite ends terminating beneath the respective "end tops" for causing the products of combustion from the fire-pot to circulate beneath said "end tops," burners disposed within the oven casing above the baffle-plate and below the bottom of the oven proper.

3. In a stove, in combination a fire-pot, an oven disposed above and in proximity to the fire-pot with the bottom of the oven spaced above the fire-pot, a baffle-plate interposed between the fire-pot and the bottom of the oven, and heating instrumentalities disposed between the baffle-plate and bottom of the oven whereby said oven may be heated by the products of combustion from said fire-pot or by said heating instrumentalities.

4. In a stove, in combination, a fire-pot disposed in the center of said stove with respect to its end walls, an oven located directly on top of the stove and above the fire-pot, a baffle-plate between the fire-pot and bottom of the oven and spaced from said oven bottom so as to provide an interposed air circulating space, and heating instrumentalities arranged in the space between the oven bottom and said baffle-plate.

5. In a stove, in combination, a fire-pot and an oven located above the fire-pot, means between the oven bottom and fire-pot for protecting the oven bottom from the products of combustion arising from the fire-pot, gas burners interposed between the oven bottom and said protecting means, and a supply pipe having a valved connection with said burners whereby said oven may be heated by the products of combustion from said fire-pot or by said burners.

6. In a stove, in combination, a base portion having a centrally disposed fire-pot and compartments upon opposite sides of said fire-pot, an oven disposed above the fire-pot, a baffle-plate between the oven bottom and fire-pot, gas burners arranged below the oven bottom and above the baffle-plate, gas burners arranged in one of said compartments, and a gas supply pipe connected with all of said burners whereby said oven and said last mentioned compartment may be heated by the products of combustion from said fire-pot or by said burners.

7. In a stove, in combination, a fire-pot, an oven casing mounted above the fire-pot, the bottom of said casing forming a baffle-

plate, the bottom of the oven proper being spaced above said baffle-plate to form an air circulating space, a fluestrip for directing the products of combustion to opposite
5 ends of the stove, burners disposed in said air circulating space and having a gas supply.

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

CHARLES M. GENTHNER.

Witnesses:

E. N. KING,
ROBERT PLOWE.