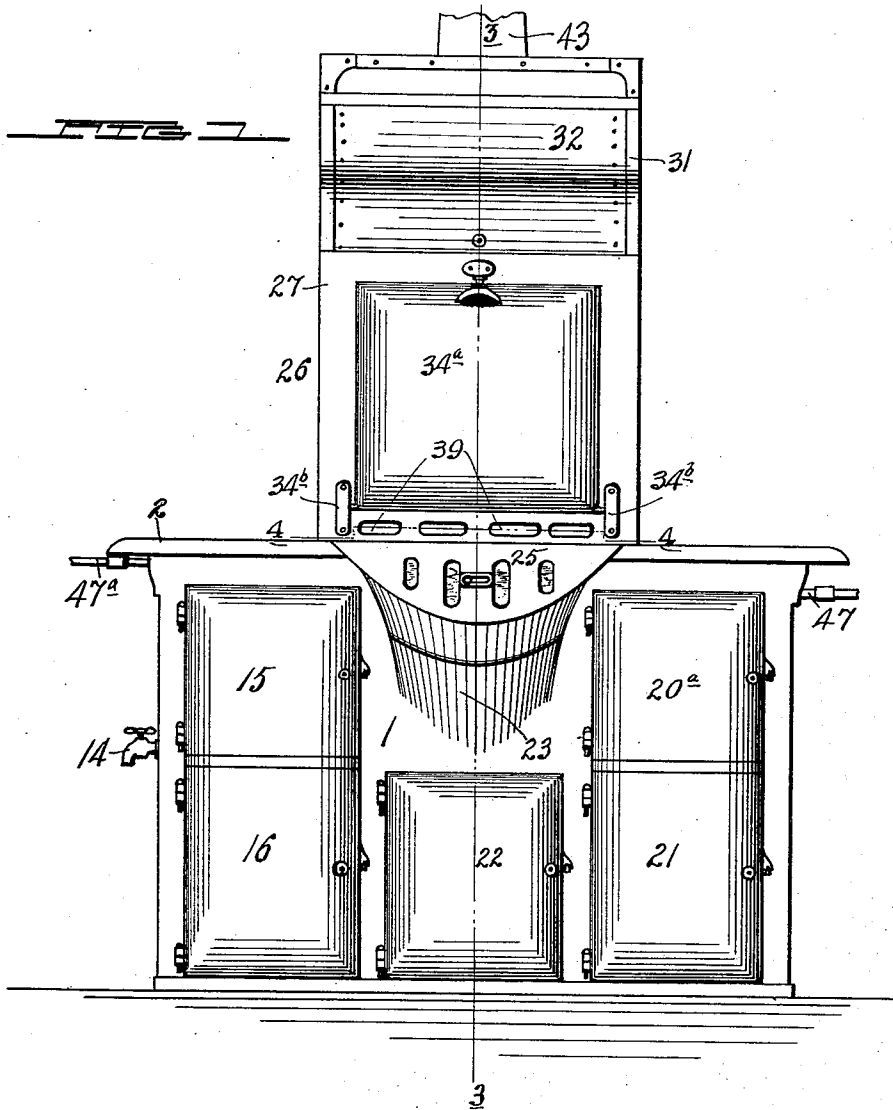


1,008,025.

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

Patented Nov. 7, 1911.

3 SHEETS—SHEET 1.



Witnesses
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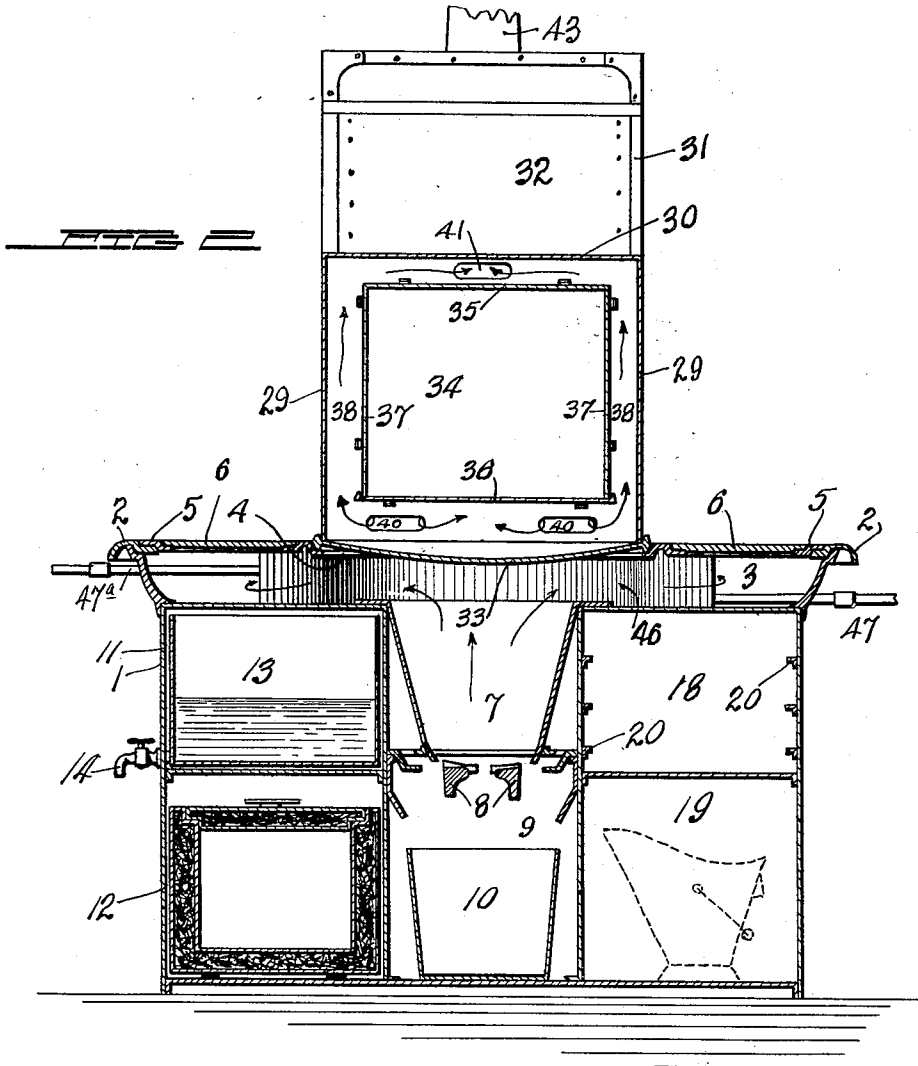
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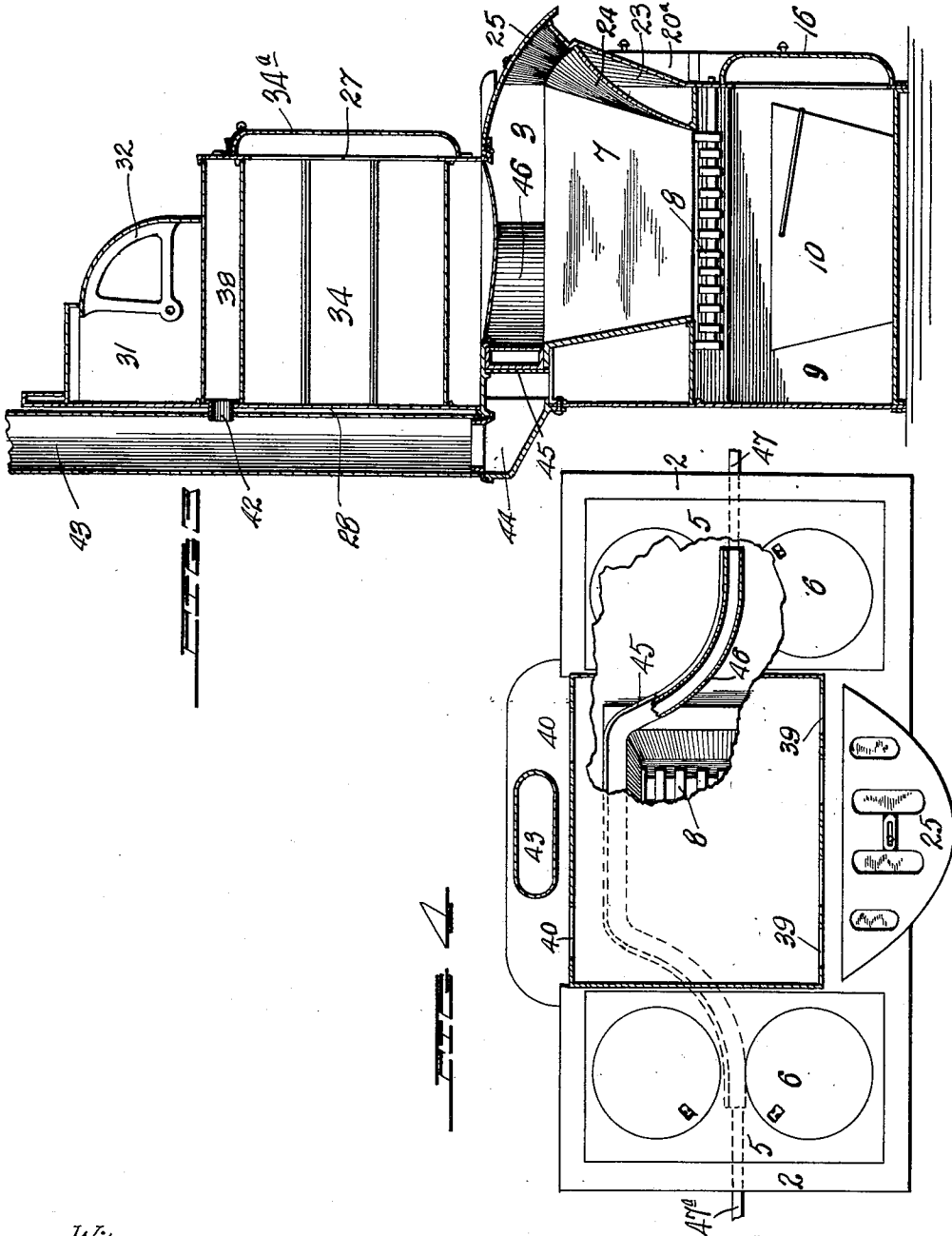
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3 SHEETS—SHEET 3.



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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.

1,008,025.

Specification of Letters Patent.

Patented Nov. 7, 1911.

Original application filed May 28, 1910, Serial No. 563,955. Divided and this application filed July 25, 1910. Serial No. 573,822.

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 firepot 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 a flue strip between the fire-pot and baffle-plate, such flue strip formed with or having attached thereto a water circulating flue adapted to have connection with a water supply at one end and suitable plumbing at its opposite end.

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 therefrom by a baffle-plate and between the baffle-plate and oven bottom is an air circulating space 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 prefer-

ably 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 stove or range 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; Fig. 4 is a cross-section on the line 4—4 of Fig. 1, with parts of said figure broken away.

This application is a division of the application filed by me on May 28th 1910, bearing Serial Number 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 would ordinarily 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 may be used for other and various purposes. 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 circulate 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. 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 said oven.

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 has 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 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.

Attached to or forming a part of the flue strip 45 and being substantially the same shape as said flue strip is a hot-water pipe or flue 46, see Figs. 3 and 4. To one end of this pipe or flue 46 is connected a supply pipe 47, which may be connected with the city supply or some other source of supply and from the opposite end of the pipe or flue 46 leads a pipe 47^a, intended to be connected in some suitable manner with a storage tank or some other plumbing.

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 of the range, the lowering of the door above the opening or covering for the fire-pot protects the person using the oven from the heat rising or radiating from the fire-pot.

What I claim is:—

1. In a stove, in combination, a fire-pot, an oven disposed above the fire-pot, a baffle-plate interposed between the oven bottom and the fire-pot, a flue-strip between the fire-pot and baffle-plate, and a water circulating flue attached to the flue strip and adapted to have connection with a water supply at one end and suitable plumbing at its opposite end.

2. A stove formed of a rectangular body, having a fire-pot located centrally with respect to its ends and compartments on the

opposite sides of said fire-pot, the top of said stove being spaced above the top of said fire-pot and the top of the uppermost compartments to form a circulating chamber for the products of combustion, a flue connected with said chamber, an oven mounted on the top of the stove immediately above the fire-pot, a baffle-plate interposed between the bottom of the oven proper and the top of the fire-pot, a hot-water pipe interposed between the top of the uppermost compartments and the top of the fire-pot on one hand and the baffle-plate and top of the stove on the other hand and terminating approximately centrally of the compartments on opposite sides of the fire-pot, said pipe also serving as a flue-strip for causing the products of combustion from the fire-pot to pass over the uppermost compartments, around the ends of the pipe and into the flue, and inlet and outlet connections with said hot-water pipe.

3. In a stove, in combination, a fire-pot, 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, a combined flue strip and hot-water chamber disposed beneath the baffle-plate and so arranged as to cause the products of combustion to travel toward the opposite ends of the stove, and pipe connections with the opposite ends of said flue-strip.

4. In a stove, in combination, a fire-pot, an oven disposed above the fire-pot, "end-top" plates on opposite sides of the oven, a hot-water flue interposed between the fire-pot and oven and terminating beneath the "end-top" plates, said hot-water flue serving to deflect the products of combustion from the fire-pot toward and beneath the "end-top" plates.

5. In a stove, in combination, a fire-pot, an oven disposed above the fire-pot, a concave baffle-plate interposed between the oven bottom and fire-pot, a flue-strip between the fire-pot and baffle-plate, and a water circulating flue attached to the flue-strip.

6. In a stove, in combination, a fire-pot, an oven disposed above the fire-pot, a concave baffle-plate interposed between the oven bottom and fire-pot, a flue-strip between the fire-pot and baffle-plate, said strip being sinuous in form and having extended ends, and a water circulating flue attached to said flue strip.

7. In a stove, in combination, a fire-pot, an oven disposed above the fire-pot, a concave baffle-plate interposed between the oven bottom and fire-pot, a flue-strip between the fire-pot and baffle-plate, said strip being sinuous in form and having extended ends, a water circulating flue attached to said flue strip, and corresponding in shape and extent thereto.

8. A stove having a fire-pot, compartments on opposite sides thereof, the top of the stove being spaced above the top of the fire-pot and the top of the compartments to form a chamber, an oven above the fire-pot, a plate interposed between the bottom of the oven and the top of the fire-pot, a flue strip interposed between the fire-pot and said plate and extending over said compartments, a water circulating flue attached to said flue strip and extending over said compartments.

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

CHARLES M. GENTNER.

Witnesses:

E. N. KING,
ROBERT FLOWE.