(No Model.)

M. N. PIEDRA.

COOKING STOVE.

No. 457,667. Patented Aug. 11, 1891.

Fig. 1.

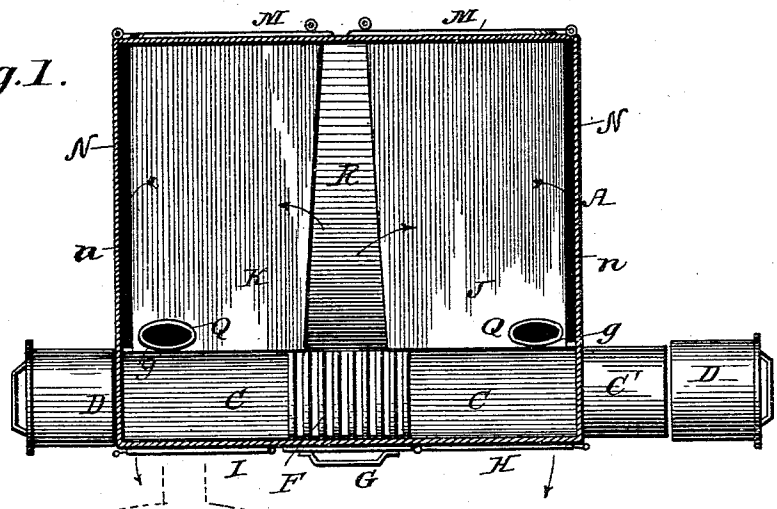


Fig. 2.

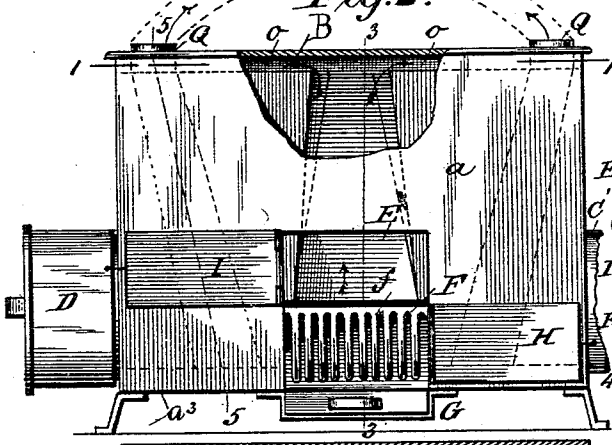


Fig. 3.

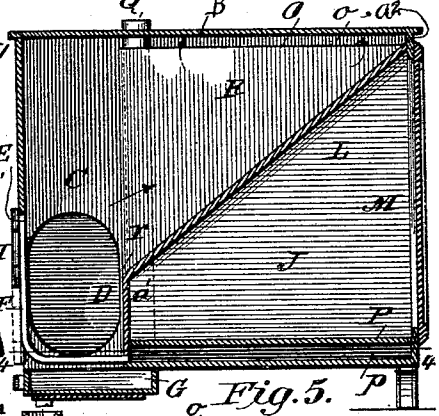


Fig. 5.

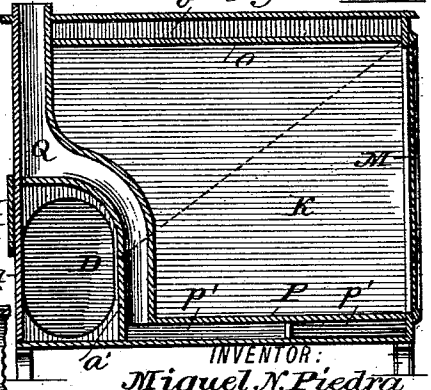
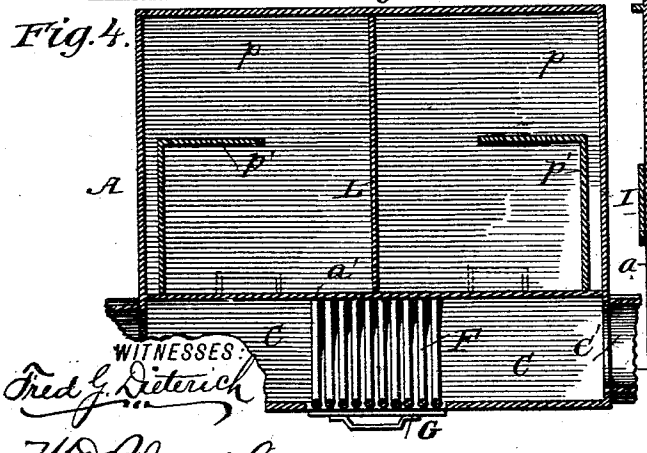


Fig. 4.



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UNITED STATES PATENT OFFICE.

MIGUEL N. PIEDRA, OF LAGOS, MEXICO.

COOKING-STOVE.

SPECIFICATION forming part of Letters Patent No. 457,667, dated August 11, 1891.

Application filed December 31, 1890. Serial No. 376,331. (No model.)

To all whom it may concern:

Be it known that I, MIGUEL N. PIEDRA, residing at Lagos, Jalisco, Mexico, have made certain new and useful Improvements in Cooking-Stoves, of which the following is a specification.

My invention relates to wood cooking-stoves; and it has for its object to provide a stove of this character in which the products of combustion are caused to pass around the ovens in such a manner that none of the heat is wasted.

It has also for its object to provide a stove in which the fire-chamber is arranged in the rear of the stove-body, whereby the radiated heat will be drawn from the front of the stove and thereby prevent it from radiating against the body of the user during the operation of cooking.

Furthermore, it has for its object to provide a stove to which the fuel can be easily fed and in which combustion will be the more evenly obtained, in which the draft can be easily regulated, and in which the entire products of the heat can be deflected over the ovens, thereby allowing for bringing the ovens to a greater heat without inconvenience to the user.

To this end my invention consists in the novel arrangement and peculiar combination of parts, all of which will hereinafter be fully described in the annexed specification, and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a horizontal section of my improved stove, taken on the line 1 1, Fig. 2. Fig. 2 is a rear view of my improved stove. Fig. 3 is a vertical transverse section of the same on the line 3 3, Fig. 2. Fig. 4 is a horizontal section on the line 4 4, Fig. 3; and Fig. 5 is a transverse section on the line 5 5, Fig. 2, but showing a modified arrangement of the fire-chamber hereinafter specifically referred to.

In the drawings, A indicates the stove-body, which is provided with the ordinary top B, formed with the usual cooking-openings. The rear part of the body A is formed with a transverse fire-chamber C, which extends entirely across the rear part of the stove, as clearly shown in the drawings, such chamber extending up to the top of the stove, being extended near its bottom, as at C′ C′, forming feed-openings, through which the fuel is fed in a manner presently explained, said extensions being held closed by means of the extensible cover-plates D D.

Centrally of the lower portion of the chamber C the back and bottom are cut away, as at E, and at such portion is provided the grate F, of the construction shown, the front part *f* thereof extending up about midway of the opening E, and below such grate is arranged the ash-box G, in a manner clearly understood by reference to the drawings. Swinging doors H and I are hinged to the back wall *a*, which are arranged to close over the opening E and swing in opposite directions, the door H serving to close over the grate portion of said opening and the door I over the upper part thereof.

In operation, when desired to cut off the draft from the fire-chamber both doors H and I are closed over the opening E. When a complete draft is desired, the upper door remains closed and the door H is swung open, and when a partial draft is desired the upper door is opened and the door H closed. This arrangement, it will be observed, provides a very simple and cheap manner of arranging the draft devices for the stove.

J K indicate the ovens, which extend from the front wall a' of the fire-chamber to the front wall a^2 of the stove, being centrally divided by a vertical partition L and provided with the ordinary swinging doors M M, as shown. The end walls N N and the upper walls O of the ovens are disposed so as to form heat-spaces $n\ n$ at ends and spaces $o\ o$ over the top of the ovens, while the bottoms P P of the ovens are arranged above the bottom a^3 of the stove, forming heat-spaces $p\ p$, the division L extending down to the bottom a^3, so as to form a heat-space p for each oven. Each of the spaces $p\ p$ are connected with the end spaces $n\ n$, and the spaces $n\ n$ with the spaces $o\ o$, said heat-spaces $p\ p$ being formed with heat-deflectors $p'\ p'$, so as to distribute the heat more evenly under the ovens.

Q Q denote the offtake-flues, which communicate with the spaces $p\ p$ near the center

thereof, and at the lower end of the wall a' said flues then pass diagonally upward and discharge near the upper rear ends of the stove, as at g g, and, if desired, can be connected with a single offtake-flue in a manner clearly understood by reference to Fig. 2 of the drawings.

To provide for a complete distribution of the heat, I form a heat-channel R between the ovens, said channel (which is most clearly shown in Figs. 2 and 3) extending from the front wall of the chamber C, as at r, at an incline to the upper front wall of the stove, and to provide for holding the heat in volume and distributing it over the ovens I form the said channel tapering upward and from its rear end forward, as shown. By this construction it will be observed the greatest amount of the heat will extend from the chamber C up into the channel R and from it over the top of the ovens. If desired, the chamber C need not extend up to the top of the stove, but be only of a height sufficient to accommodate the feeding of the fuel through the side extensions, as shown in Fig. 5 of the drawings. In this case the front wall a' of the chamber is curved over to the rear wall, thus allowing the upper parts of the ovens to extend from the front to the rear walls of the stove. By this arrangement all of the heat is carried up over the ovens through the channel R.

In operation the stove is supplied with cord-wood through the side openings C′ C′, the construction of which allows for the insertion of large sticks or logs, the ends of which may project beyond the extensions C′, the caps D serving to lengthen the said extensions. The fire having been started and the draft-doors H and I adjusted as desired, the fuel as it is consumed at the grate portion of the chamber C can be gradually pushed inward by closing up the caps D over the grate F. Now the heat as it is generated will pass up over the ovens, as stated, down into the spaces n n at the sides of the ovens, then into the spaces p p under same, and out up into the offtakes Q Q, which being arranged diagonally over the rear wall of the ovens, serve to still further distribute the heat.

Manifestly the several heat-spaces may be provided with dampers of ordinary construction, whereby the heat may be deflected so as to go all over the ovens or otherwise.

My improved stove can be manufactured at a small cost, it being very simple in construction and effective for its desired purpose.

By arranging the fire-chamber in the manner stated the necessity of chopping up the cord-wood into sticks is avoided. A single log slipped into the fire-chamber through the extensions or openings C′ C′ serves to supply the necessary fuel for a considerale time.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a cooking-stove, the combination, with the body formed with an oven or ovens extending from the front to the rear of the stove, of a fire-chamber arranged at the lower rear portion of the oven or ovens, and combustion flues or spaces connected with said chamber and extended about the ends, tops, and bottoms of such ovens, substantially as and for the purpose described.

2. A cooking-stove formed with a fire-chamber at the rear of its oven, such chamber consisting of a central grate portion and lateral adjustable extensions, substantially as shown and described.

3. A cooking-stove formed of a body portion having two ovens extended from the front to the rear wall of the stove, a heating-chamber arranged at the rear of such ovens, heat-spaces arranged about the top, sides, and bottom of the ovens, and a heat-channel arranged between the ovens and communicating with the said spaces and the heating-chamber, substantially as and for the purpose described.

4. In a cooking-stove, the combination, with a plurality of ovens arranged to extend from the front to the rear of the stove, and heat-spaces arranged about the top, sides, and bottom of said ovens, connected with the offtake-flue, of a fire-chamber arranged at the rear of such ovens, and a heat-channel arranged between the ovens and extending diagonally from the fire-chamber to the upper front edge of the ovens, substantially as shown and described.

5. The combination, with the stove-body A and the ovens J K, of the fire-chamber C, formed with a central opening E, the grate F, disposed therein, lateral extensions C′ C′, the detachable extensible caps D D, and the draft-doors H I, all arranged substantially in the manner and for the purpose described.

6. The combination, with the body A, the ovens J K, a fire-chamber arranged transversely to the rear wall of the ovens, and the heat spaces or flues arranged about the ovens, as stated, of the central draft-channel R, arranged diagonally between the ovens and tapered vertically and horizontally from its base upward, said channel communicating with the fire-chamber and the hot-air spaces about the ovens, substantially as and for the purpose described.

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SOLON C. KEMON.