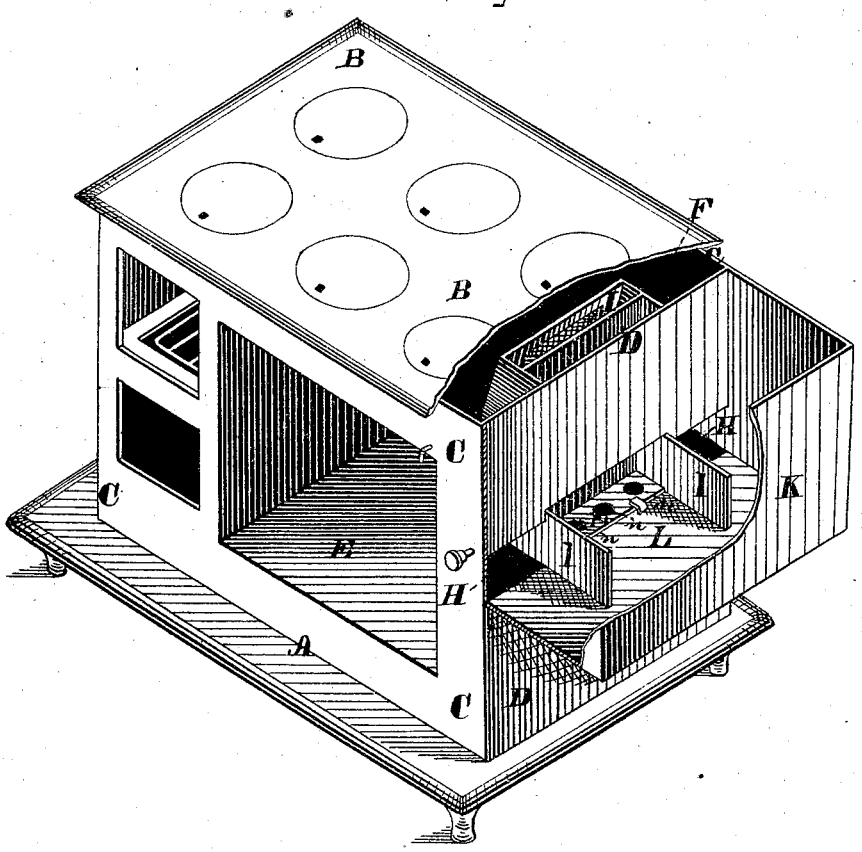
4 Sheets--Sheet 1.

A. C. CORSE & M. G. FAGAN.

Reservoir Cooking Stove.

No. 163,155. Patented May 11, 1875.

Fig. 1.



WITNESSES:

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Prindle and Goepel their Attys

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

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Fig. 2.

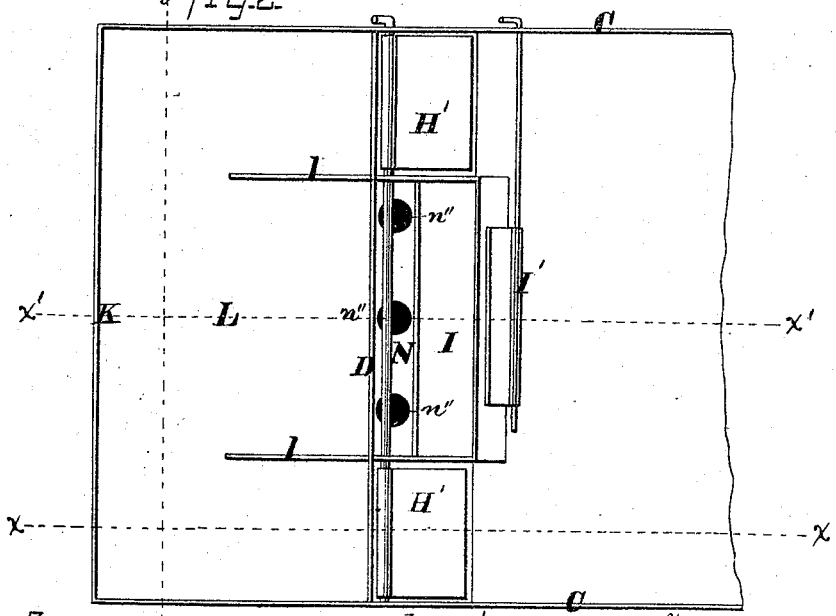

Fig. 3.

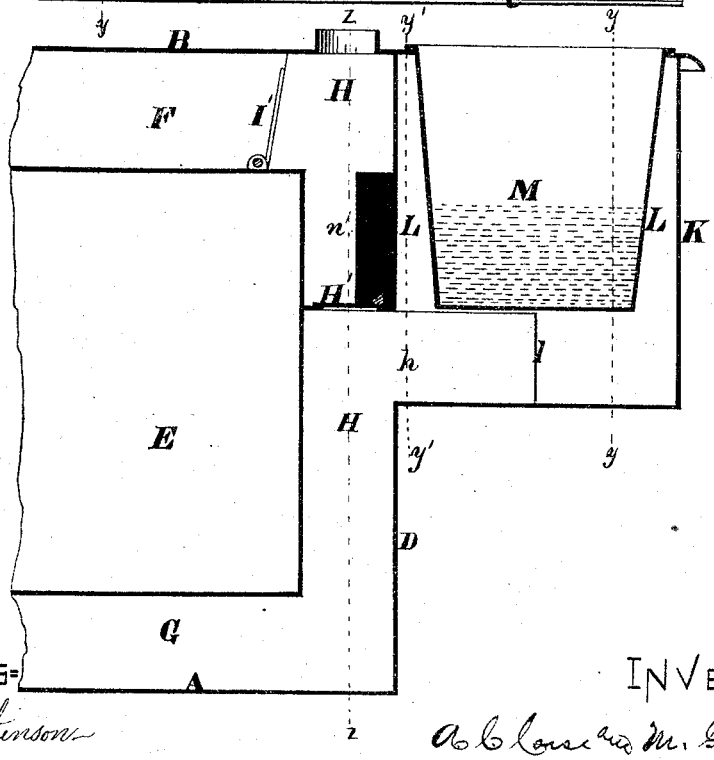

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Fig. 4.

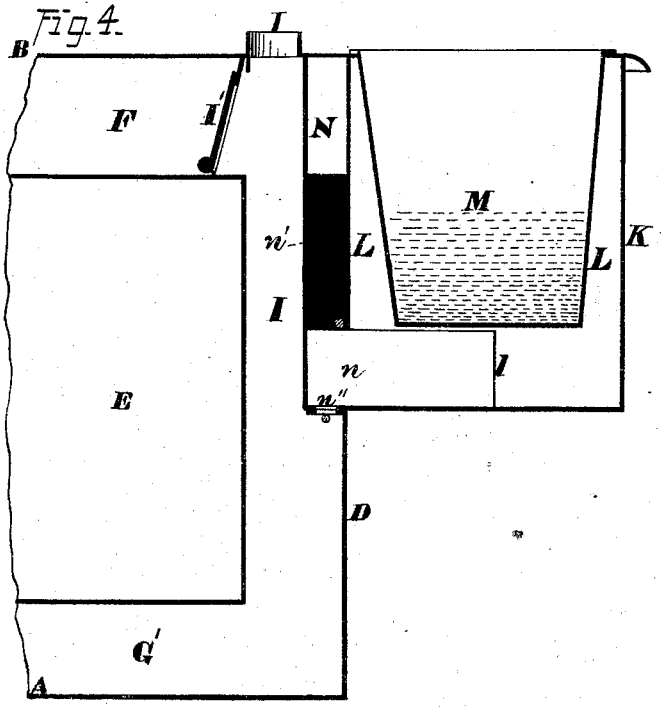

Fig. 5.

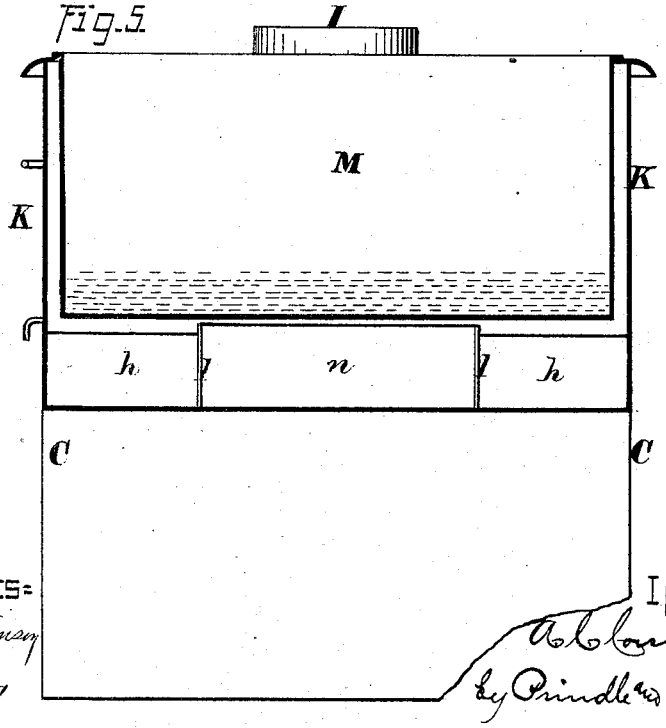

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Fig. 6.

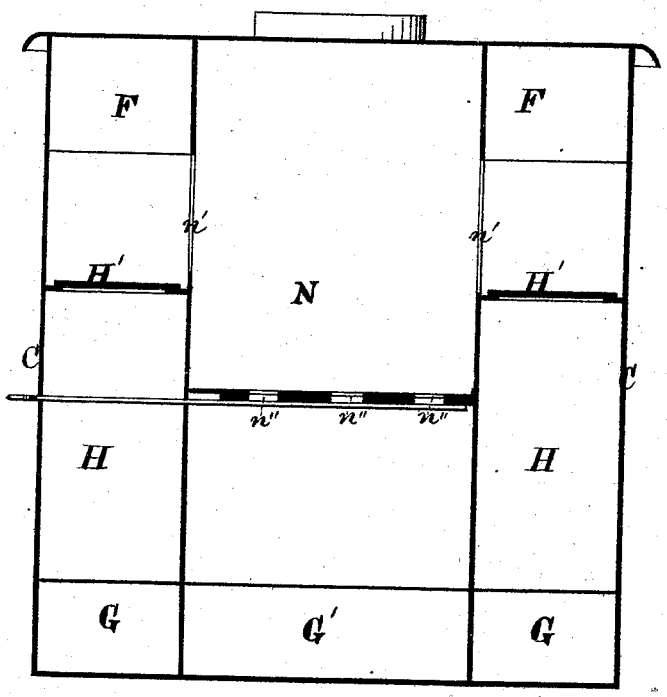
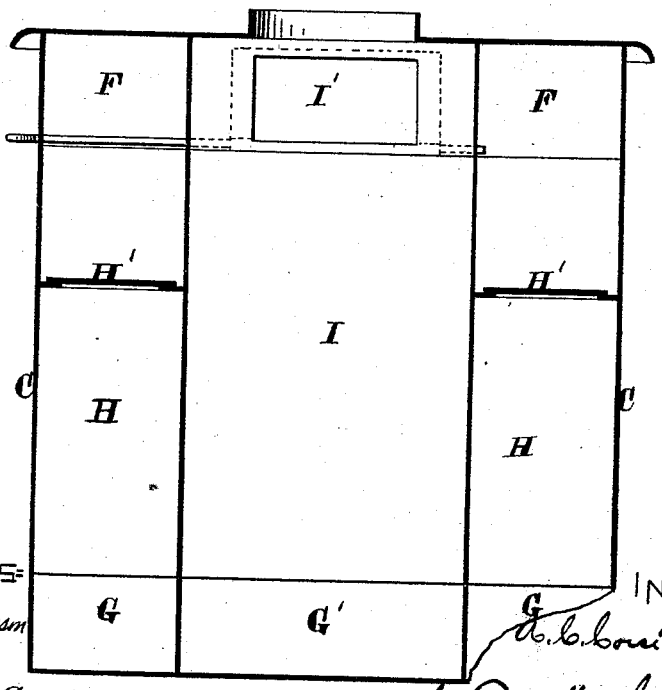


Fig. 7.



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UNITED STATES PATENT OFFICE.

ALBERT C. CORSE AND MICHEL G. FAGAN, OF TROY, NEW YORK.

IMPROVEMENT IN RESERVOIR COOKING-STOVES.

Specification forming part of Letters Patent No. **163,155**, dated May 11, 1875; application filed April 14, 1875.

CASE 3.

To all whom it may concern:

Be it known that we, ALBERT C. CORSE and MICHEL G. FAGAN, of Troy, in the county of Rensselaer and in the State of New York, have invented certain new and useful Improvements in Reservoir Cooking-Stoves; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of our stove, a portion of its rear end being broken away, so as to show the arrangement of flues. Fig. 2 is a plan view of the upper side of the same, the top plate being removed, so as to show the interior arrangement of said flues. Figs. 3 and 4 are vertical sections of the said stove upon lines *x x* and *x' x'*, respectively, of said Fig. 2; and Figs. 5, 6, and 7 are cross-sections upon lines *y y*, *y' y'*, and *z z*, respectively, of Figs. 2, 3, and 4.

Our invention is designed, generally, to facilitate the heating of water within the reservoir of a cooking-stove, either with or without heating the oven; and it consists, principally, in a supplemental flue formed between the ascending flue and the reservoir-chamber, which communicates at its lower end with said chamber below the reservoir, and at its sides with the descending flues, substantially as and for the purpose hereinafter specified. It consists, further, in the combination of the supplemental flue, reservoir-chamber, descending flues, and their communicating openings, substantially as and for the purpose hereinafter shown. It consists, finally, in the combination of the descending, ascending, and supplemental flues, with their dampers and communicating openings, with the top oven-flues and reservoir-chamber, substantially as and for the purpose hereinafter set forth.

In the annexed drawings, A represents the bottom plate, B the top plate, C and C the side plates, and D the rear end plate, of a cooking-stove, having an oven, E, top oven-flue F, bottom oven-flues G and G', and between said oven and the end plate D two descending and one ascending flues, H H and I, respectively. Attached to or upon the end plate D is a casing, K, which incloses a chamber, L, for the reception of a reservoir, M, which latter nearly fills said chamber horizontally, while between its bottom and the lower side of said casing is left a space that has substantially the vertical dimensions of the sheet-flue F, which space, by means of an opening, *h*, communicates with each descending flue H. As seen in Figs. 1 and 6, the ascending flue I has about the same horizontal dimensions, across the stove, of both of the descending flues, but from front to rear (between the top plate B and the bottom of the casing K) has but one-half the depth of the latter, the remaining space N between said ascending flue and the end plate D forming a supplemental flue, which at its lower end and rear side communicates with the reservoir-chamber L by means of an opening, *n*. From a point upon a line, vertically, with the top of the opening *n*, upward to the level of the bottom of the shut flue F, the side walls of the supplemental flue N are removed, so as to form an opening, *n'*, between the same and each descending flue H, while within the latter, at or just above each opening *h*, is placed a rolling damper, H', that, when turned to a horizontal position, will cut off said flue at such point, and prevent the further downward passage of the heated gases. The usual direct-draft damper, I', between the shut flue F and ascending flue I, and two vertical flue-strips, *l* and *l*, which extend from the sides of the opening *n* rearward about one-half the depth of the chamber L, completes our invention, which operates as follows:

When it is desired to heat the oven alone, the damper I' is closed and the dampers H' and H' are opened, by which means the heated escaping products of combustion take the usual course through the shut flue F, descending flues H and H, bottom oven-flues G and G', and ascending flue I. To heat both oven and reservoir, all of the dampers are closed, when the heated gases will pass from the descending flues H and H into the supplemental flue N, from the latter into the reservoir-chamber L, and, after passing rearward around the vertical flue-strips *l* and *l*, will again enter said descending flues through the openings *h* and

h, and from thence will continue through the oven-flues, as before.

By providing dampered openings *n''* *n''*, &c., at the lower end of the flue N, the heated gases may be caused to pass through the flues H and H to said flue N, and from the same directly to the ascending flue I, and by radiation through the back plate D, and by expansion into the chamber L, through the opening *n*, heat moderately the contents of the reservoir without heating the oven.

Having thus fully set forth the nature and merits of our invention, what we claim as new is—

1. The combination and arrangement, between the ascending flue I and reservoir-chamber L, of the supplemental flue N, which communicates at its lower end with the latter, and at its sides with the descending flues H and H, substantially as and for the purpose specified.

2. The combination of the descending flues H and H, supplemental flue N, reservoir-chamber L, and openings *h*, *n*, and *n'*, substantially as and for the purpose shown.

3. In combination with the top oven-flue F and reservoir-chamber L, the descending flues H and H, ascending flue I, supplemental flue N, openings *h*, *n*, and *n'*, and dampers H' and I', substantially as and for the purpose set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 11th day of March, 1875.

A. C. CORSE.
MICHEL G. FAGAN.

Witnesses:
ALBERT R. CORSE,
WM. A. JOHNSON.