4 Sheets--Sheet 1.

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

Reservoir Cooking Stove.

No. 163,157. Patented May 11, 1875.

Fig. 1.

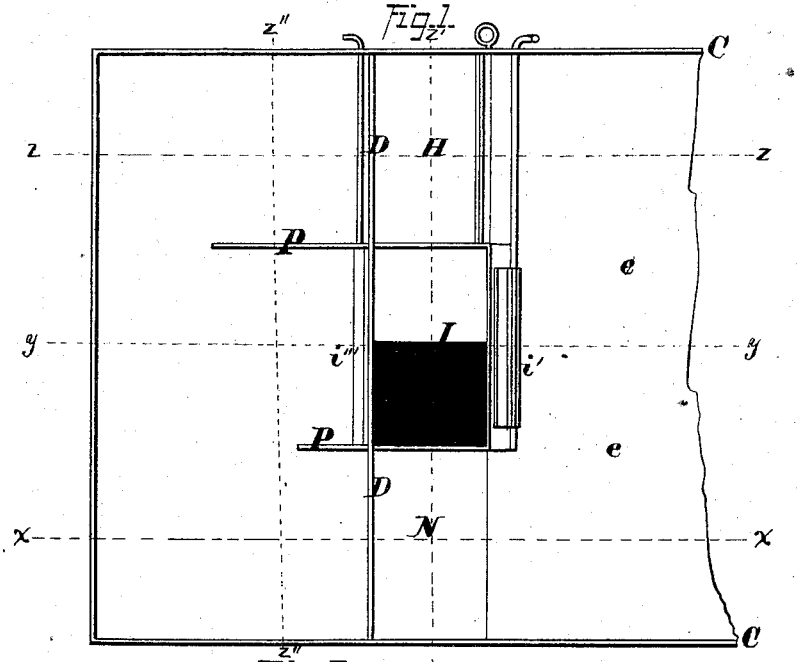
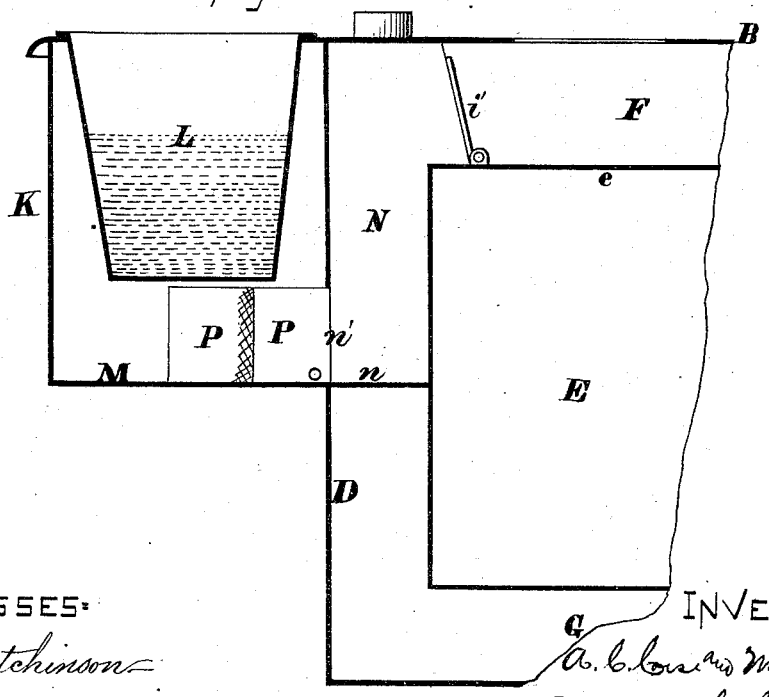


Fig. 2.



WITNESSES:

Jas. E. Hutchinson

John R. Young

INVENTORS.

A. C. Corse and M. G. Fagan,

by Prindle and Boyden Attys

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Fig. 3.

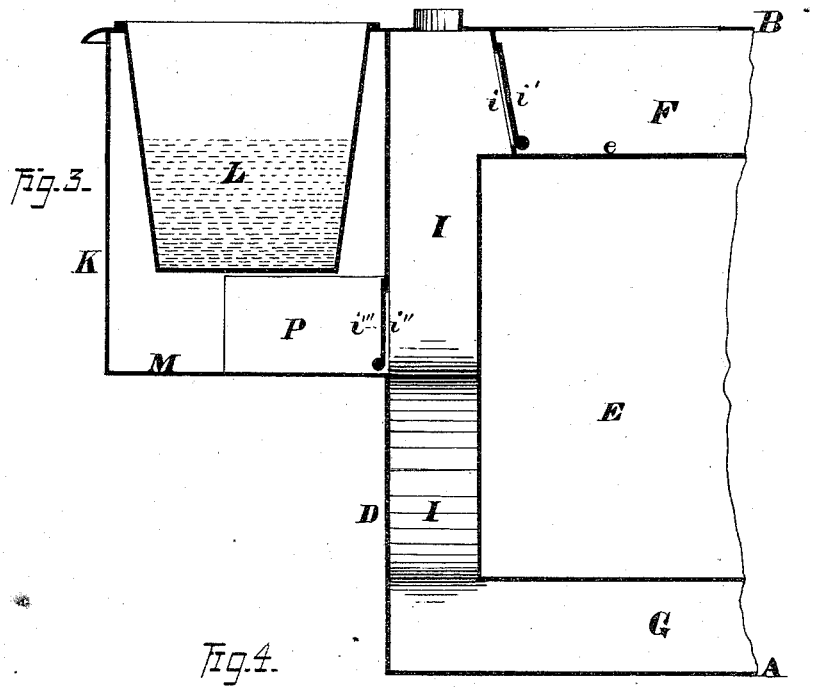
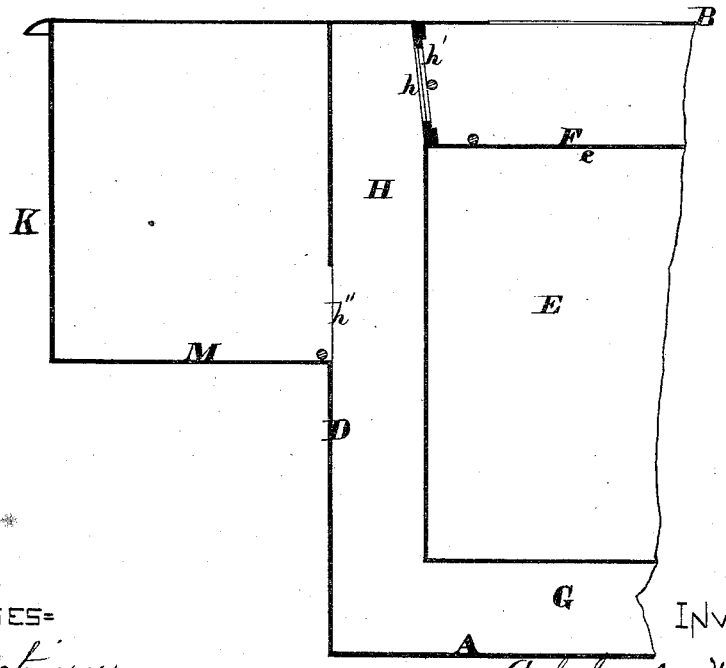


Fig. 4.



WITNESSES=

Jas. E. Hutchinson

John R. Young

INVENTORS.

A. C. Corse and M. G. Fagan

by Prindle and Co. their attys

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

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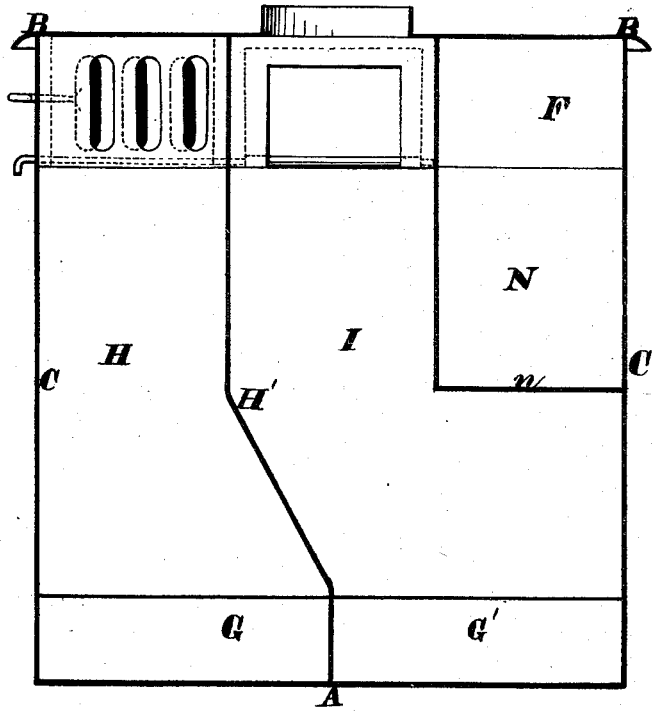
Fig. 5.



WITNESSES:
Jas. E. Hutchinson
John R. Young

INVENTORS.
A. C. Corse and M. G. Fagan, by
Prindle and Loughran Attys

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

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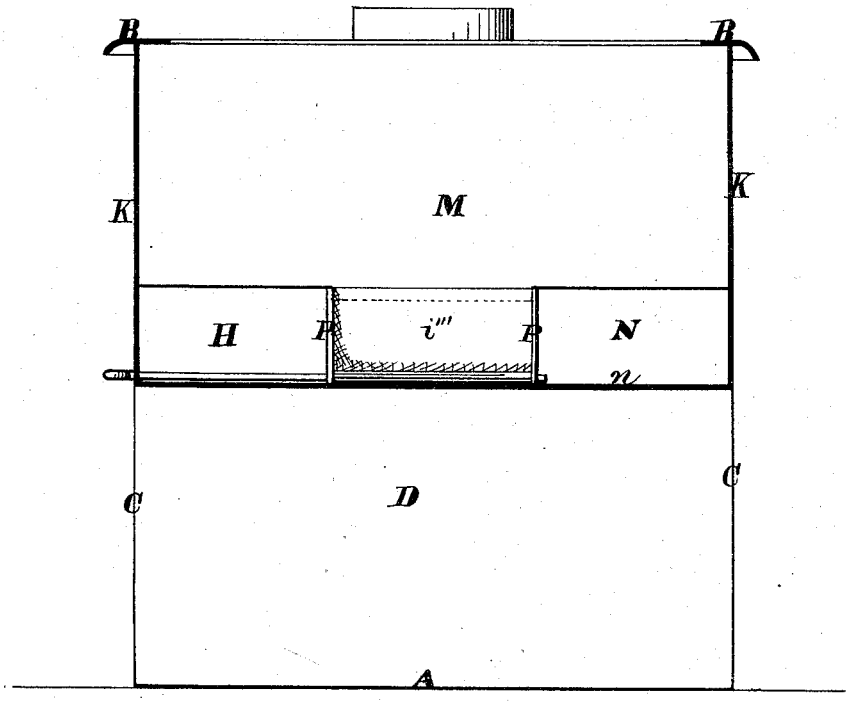
Fig. 6.



WITNESSES=
Jas. C. Hutchinson
John R. Young

INVENTORS.
A. C. Corse and M. G. Fagan,
by Prindle and Lothrin Attys

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

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. **163,157**, dated May 11, 1875; application filed April 14, 1875.

CASE 1.

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-Stove; 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 plan view of the upper side of our improved stove, with the top plate removed. Figs. 2, 3, and 4 are vertical sections from front to rear, upon lines *x x*, *y y*, and *z z*, respectively, of Fig. 1. Fig. 5 is a cross-section upon line *z' z'* of Fig. 1, and Fig 6 is a like view upon line *z'' z''* of same figure.

Letters of like name and kind refer to like parts in each of the figures.

The design of our invention is to render the operations of heating the oven and water-reservoir of a cooking-stove more fully under control than has heretofore been practicable; and to this end it consists, principally, in combining with the descending and ascending flues of a two-flue cooking-stove, which are located between the oven and the casing of a water-reservoir, and at their upper ends communicate through dampered openings with the top oven-flue, and at their rear sides with a sheet-flue beneath said reservoir, a third vertical flue, which extends between said top oven-flue and said reservoir-flue, substantially as and for the purpose hereinafter specified. It consists, further, in the combination of the descending and ascending flues with their dampered openings, with the top oven-flue and reservoir-flue, substantially as and for the purpose hereinafter shown. It consists, finally, in the combination of the descending, ascending, top oven, reservoir, and supplemental flues, substantially as and for the purpose hereinafter set forth.

In the annexed drawing, 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 and bottom oven-flues F and G, respectively, and between said oven and rear end plate a descending and an ascending flue, H and I, respectively. Secured to or upon the outer side of the end plate D is a casing, K, for the reception of a water-reservoir, L, which casing embraces closely the sides and ends of the same, but has a somewhat greater depth, so as to leave between their respective bottoms a sheet-flue, M. As seen in Fig. 6, the flues H and I at their upper ends have each one-third the transverse dimensions of the stove, and are arranged so as to bring said descending flue H at one side, and said ascending flue at the center of said stove, which arrangement is continued downward to the bottom of the casing K, from whence the plate H', that separates said flues, inclines toward the transverse center of the stove, so that at the bottom of the same they divide the space equally. Between the ascending flue I and the left-hand side of the stove is a space, N, which corresponds in horizontal dimensions to the like feature of said flue, is open at its upper end, and at its lower end, upon a line with the bottom of the reservoir-casing K, is inclosed by means of a horizontal flue-strip, *n*. An opening, *n'*, in the end plate D, corresponding in vertical dimensions to the sheet-flue M, affords communication between the latter and the space or flue N. Within the front side of the descending flue H, above the top oven-plate *e*, is provided an opening, *h*, which is inclosed, when desired, by means of a sliding damper, *h'*, while a similar opening, *i*, within the front of the ascending flue I, is inclosed by a rolling damper, *i'*. Between the sheet-flue M and the flues H and I are provided openings *h''* and *i''*, respectively, the latter of which is inclosed, when desired, by means of a rolling damper, *i'''*, that is hinged at its lower edge. Two vertical flue-strips, P and P, extending rearward within the sheet-flue M from the ends of the opening *i''*, complete the invention, the operation of which is as follows:

When fire is first started the damper *i'* is turned downward, so as to admit the gaseous products of combustion directly to the exit-flue, but at all other times is kept closed.

When it is desired to heat the oven, but not the reservoir, the dampers i' and i''' are closed and the damper h' opened, by which means the heated gases pass downward through the flue H, through the bottom oven-flues G and G′, and thence upward through the flue I to the exit-pipe. When it is desired to heat the reservoir alone the dampers h' and i''' are opened, so as to permit the heated gases to pass downward through the flues H and N to the reservoir-flue M, and from the latter directly into the ascending flue I. When both oven and reservoir are to be heated at one time, all of the dampers are closed, when the heated gases will pass down the supplemental flue N into the sheet-flue M, and through the latter into the descending flue H, after which said gases will pass beneath the oven in the usual manner.

The construction shown gives to the operator such complete control over the reservoir and oven as to enable either or both to be heated when desired with speed and economy, and without interference one with the other.

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

1. In combination with the flues H and I, provided with the openings h, h'', i, and i'', and dampers h', i', and i''', the supplemental flue N, communicating at its upper end with the top oven-flue F, and at its lower end with the reservoir sheet-flue M, substantially as and for the purpose specified.

2. In combination with the sheet-flues F and M, the flue H, provided with the openings h and h'' and damper h', and the flue I, having the openings i and i'' and the dampers i' and i''', substantially as and for the purpose shown.

3. The sheet-flues F and M, vertical flues H, I, and N, communicating openings h, h'', i, i'', and n', and dampers h', i', and i''', all combined to operate in the manner and for the purpose substantially as 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.