3 Sheets--Sheet 1.

G. HAYNER.

Reservoir Cooking-Stove.

No. 163,194. Patented May 11, 1875.

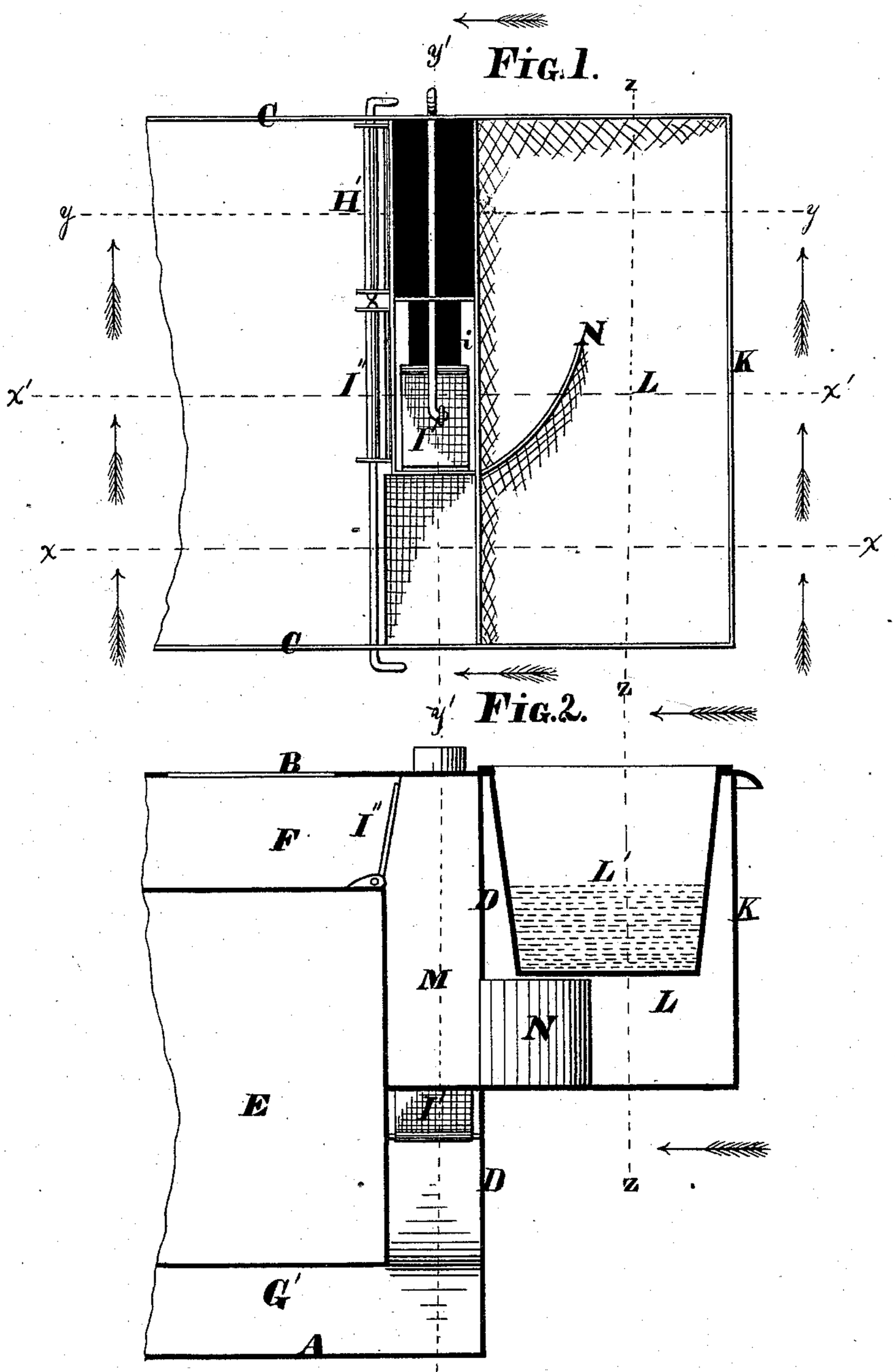

Fig. 1.

Fig. 2.

WITNESSES:

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INVENTOR.

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FIG. 3.

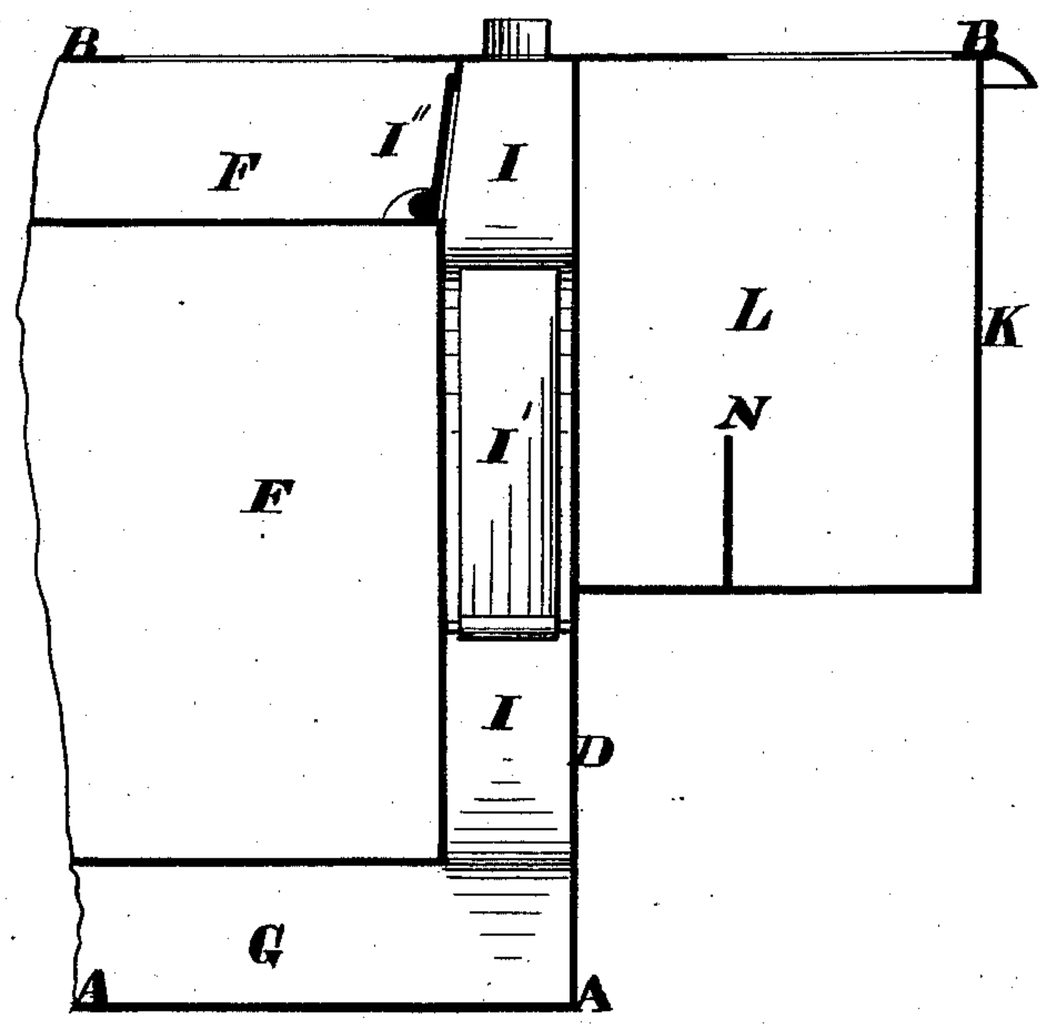

FIG. 4.

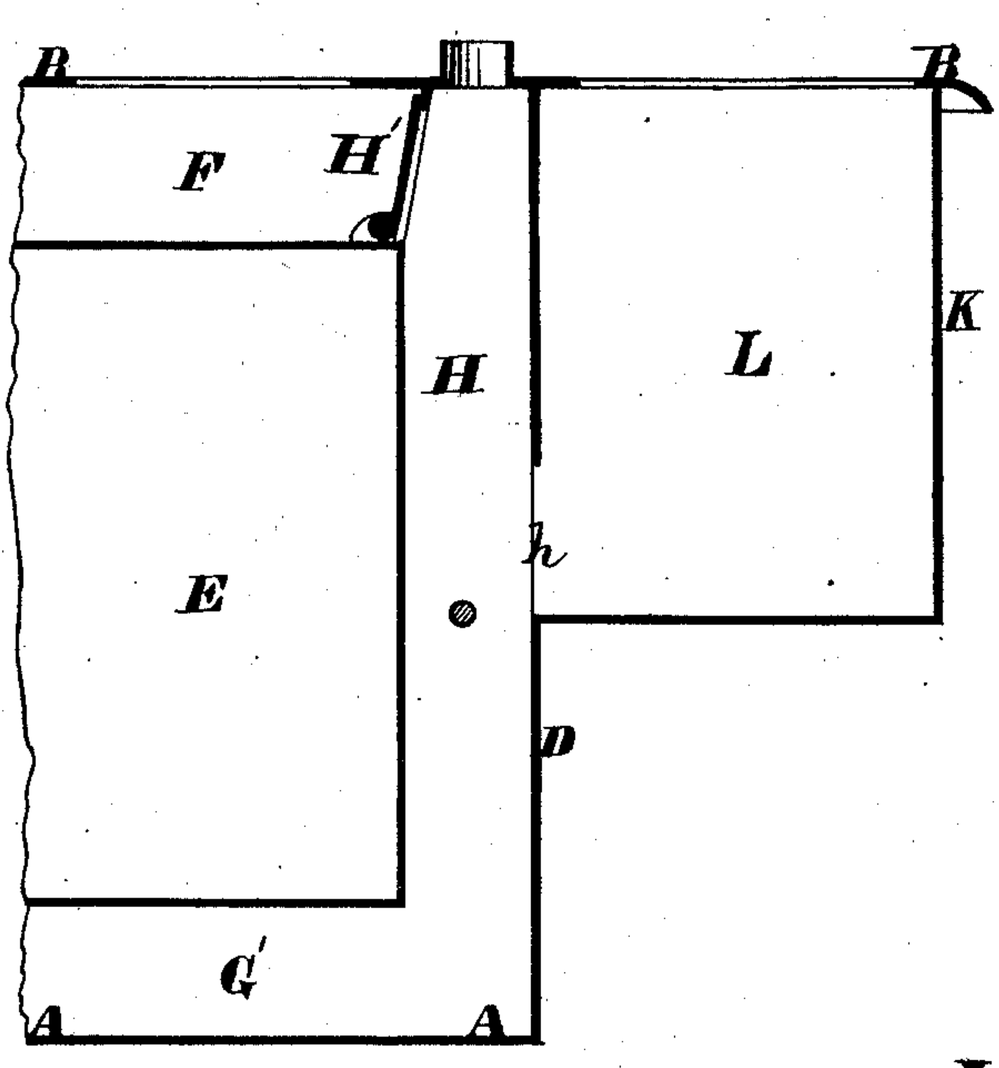

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FIG. 5.

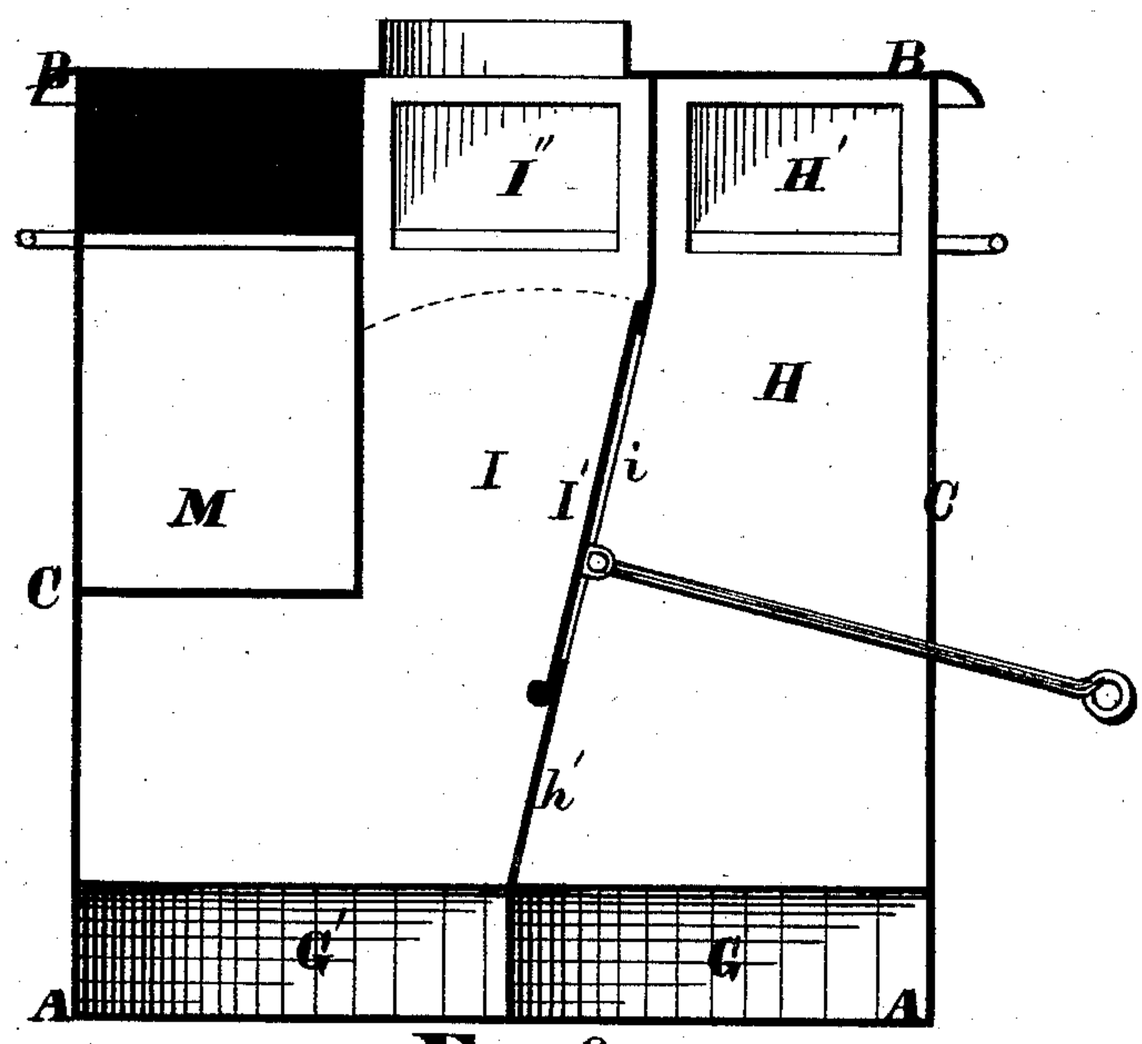
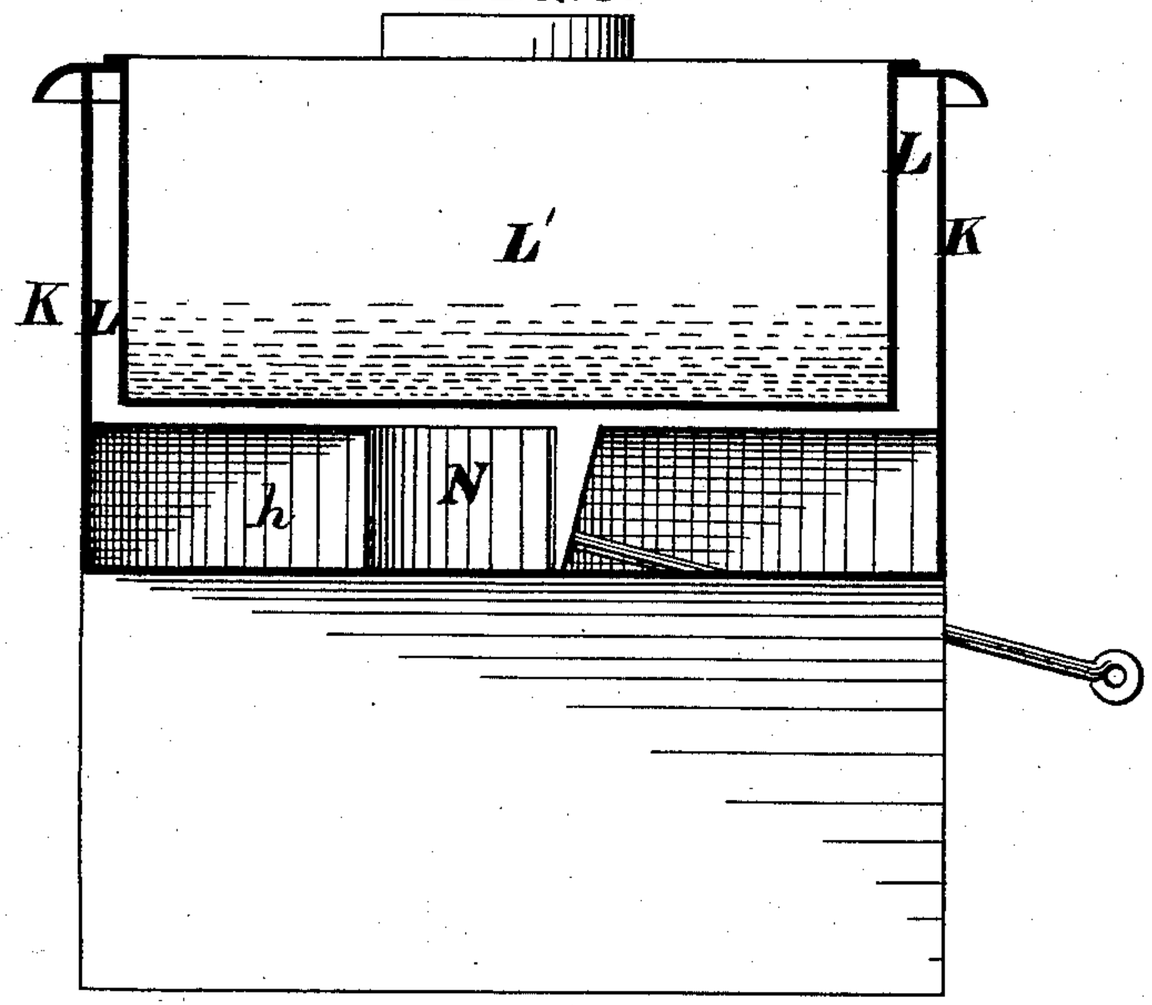


FIG. 6.



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UNITED STATES PATENT OFFICE.

GEORGE HAYNER, OF TROY, NEW YORK, ASSIGNOR TO HIMSELF AND EDDY, CORSE & CO., OF SAME PLACE.

IMPROVEMENT IN RESERVOIR COOKING-STOVES.

Specification forming part of Letters Patent No. **163,194**, dated May 11, 1875; application filed April 14, 1875.

To all whom it may concern:

Be it known that I, GEORGE HAYNER, 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 my improved stove, the top plate being removed. Figs. 2, 3, and 4 are sections from front to rear upon lines *x x*, *x' x'*, and *y y* of Fig. 1; and Figs. 5 and 6 are cross-sections upon lines *y' y'* and *z z* of same figure.

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

The design of my invention is to place the heating of a water-reservoir more completely under control than is usually the case; and to this end it consists in a stove provided at one end with a descending, an ascending, and a supplemental flue, which descending and supplemental flues communicate with the top oven-flue and with the lower portion of a reservoir-chamber, and said descending and ascending flues communicate directly with each other by means of a dampered aperture within the plate which separates them, substantially as and for the purpose hereinafter specified.

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 stove having an oven, E, top oven-flue F, bottom oven-flues G and G', and, between said oven and rear end plate, a descending and an ascending flue, H and I, respectively, which communicate at their ends with said top and bottom oven-flues. Secured to or upon the end plate D is a casing, K, which incloses a reservoir-chamber, L, the front wall of which is said end plate. As seen in Figs. 1 and 6, the descending and ascending flues H and I, respectively, have each such transverse dimensions from their upper ends to, or nearly to, the bottom of the chamber L as to cause them to occupy two-thirds of the space between the side plates C and C, while the remaining space forms a supplemental flue, M, which extends from the top plate B to the bottom of said reservoir-chamber L, and communicates, at its ends, with the latter and with the top oven-flue F. Between the lower side of the reservoir-chamber L and the descending flue H is provided an opening, *h*, through which the heated escaping products of combustion may pass, while within the plate *h'*, which separates said flue H from the ascending flue I, is provided an opening, *i*, that is inclosed, when desired, by means of a rolling damper, I', which damper is, preferably, hinged at its lower end. At their upper ends and front sides the flues H and I communicate with the top oven-flue F, and such communication is regulated or closed by means of rolling dampers H' and I'', respectively. A vertical flue-strip, N, extending between the bottom of the chamber L and the bottom of the reservoir L', and from the inner side of the opening *m* rearward and toward the opposite side of the stove in a curve, completes my invention, which operates as follows: When it is desired to heat both oven and reservoir, all of the dampers are closed, when the heated gases will pass down the supplemental flue M rearward beneath said reservoir until they have passed the flue-strips N, from thence forward, through the opening *h*, into the descending flue H, after which said gases will pass around said oven in the usual manner. When the reservoir is to be heated without heating the oven the dampers H' and I'' are closed and the damper I' opened, after which the heated gases will pursue the same course as before until after they enter the descending flue H, from whence, instead of passing around the oven, said gases will escape into the ascending flue I. When the oven alone is to be heated the dampers I' and I'' are closed and the damper H' opened, when the heated gases will enter the upper end of the flue H and pass around said oven in the usual manner, said reservoir in such case receiving only the heat that is radiated through the back plate D and such as is contained within the gases which expand into the chamber L through the opening *h*. When neither oven or reservoir are to be heated the damper I'' is opened, so as to permit the heated gases to pass directly to the exit-flue.

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

In combination with the top oven-flue F, descending flue H, ascending flue I, and reservoir-chamber L, constructed and relatively arranged as shown, the supplemental flue M, extending between said top oven-flue and reservoir-chamber, and the opening *i* and damper I′, which afford direct communication between said flues H and I, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 11th day of March, 1875.

GEORGE HAYNER.

Witnesses:

ALBERT R. CORSE,

HIRAM EDDY.