

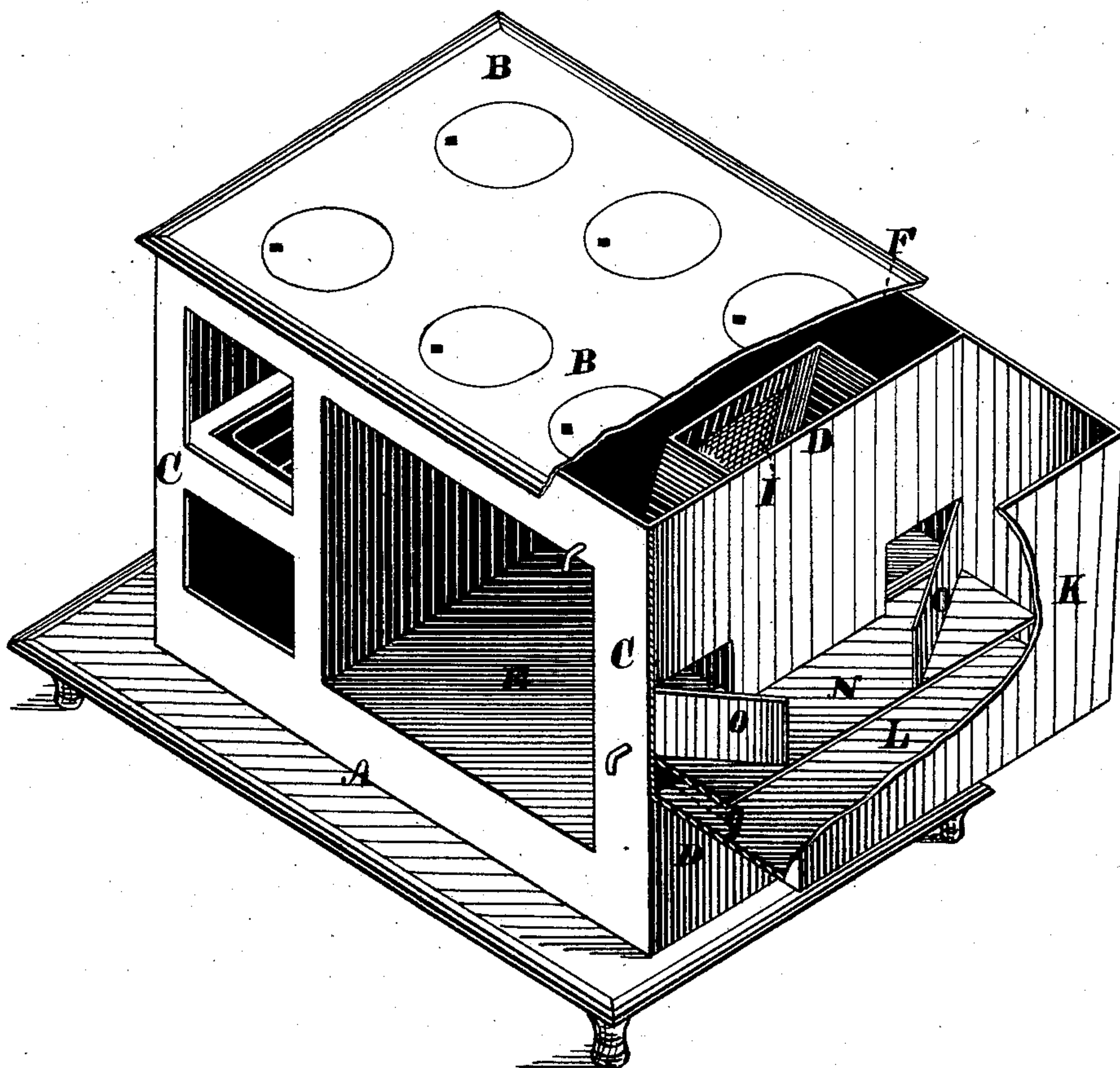
A. C. CORSE & M. G. FAGAN.

Reservoir Cooking Stove.

No. 163,158.

Patented May 11, 1875.

Fig. 1.



WITNESSES:

*Jas. E. Hutchinson
 John R. Young*

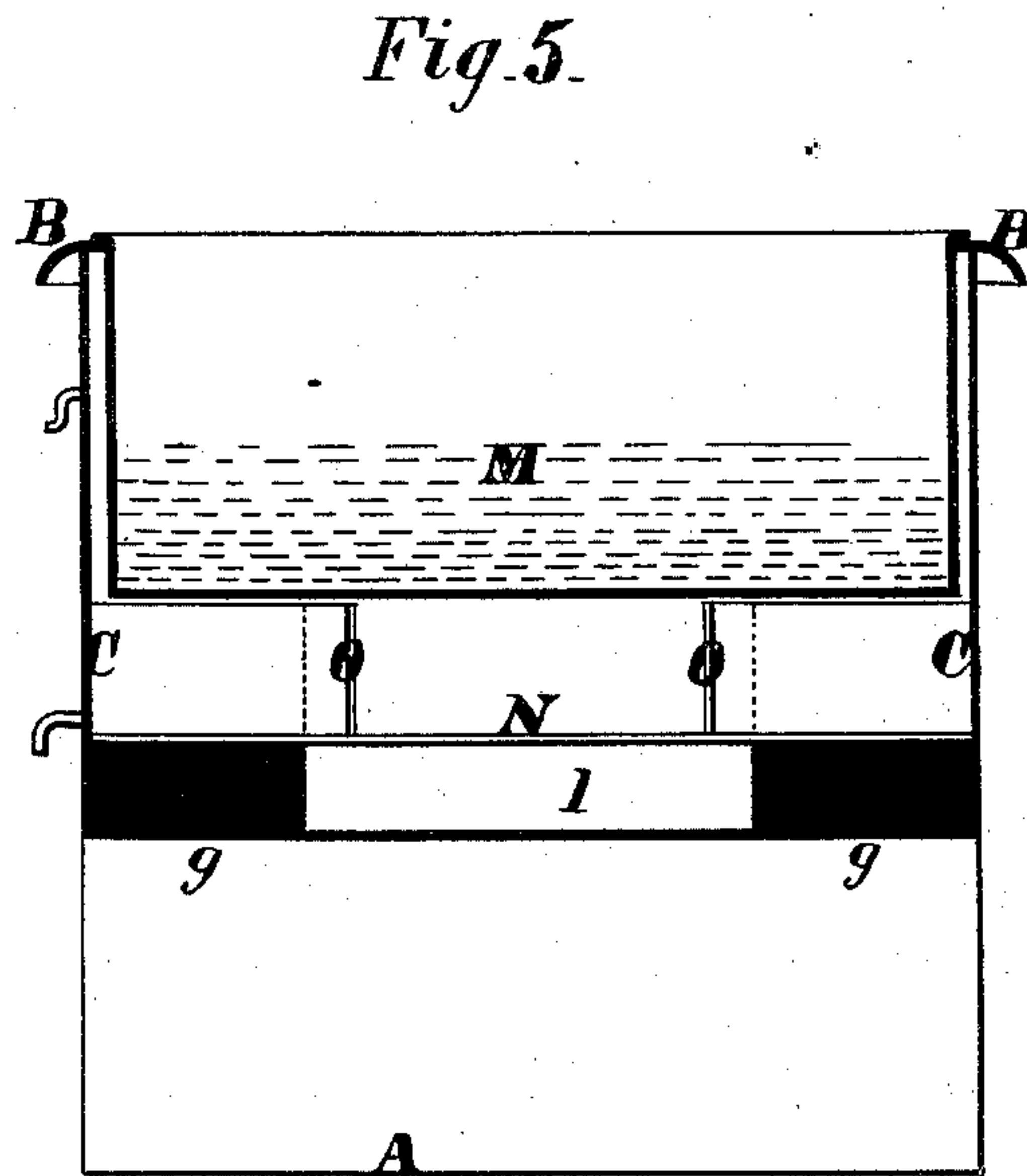
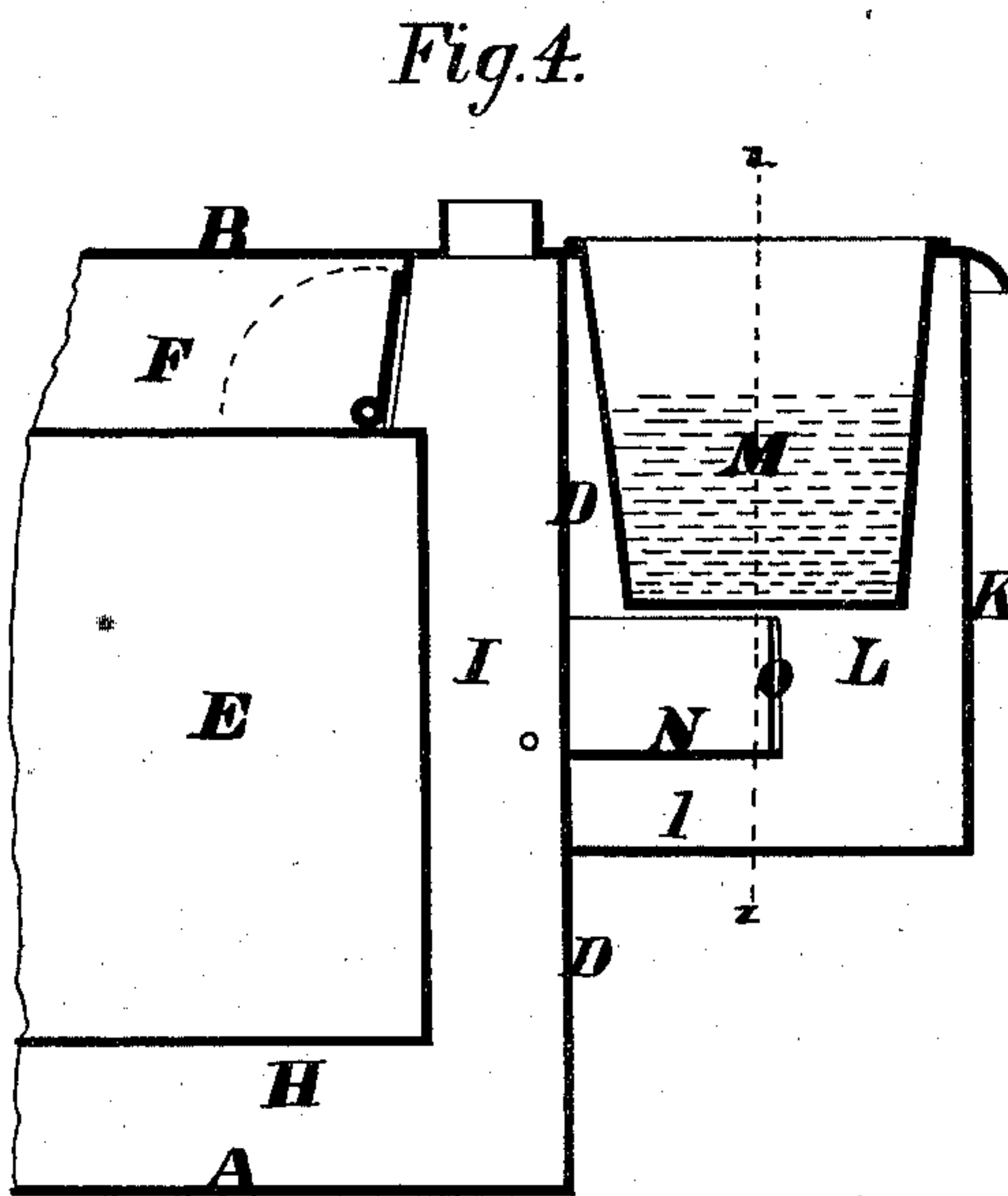
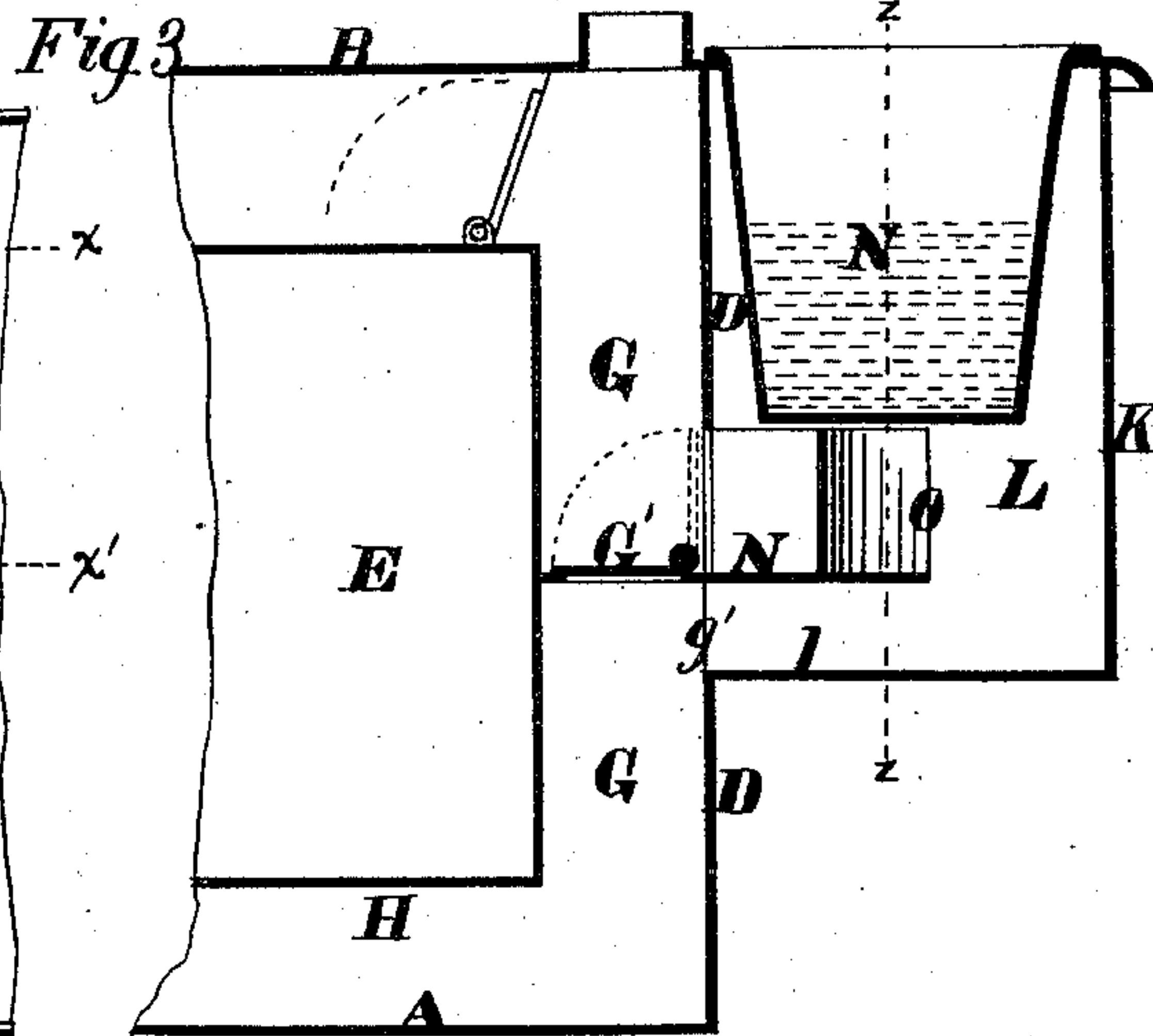
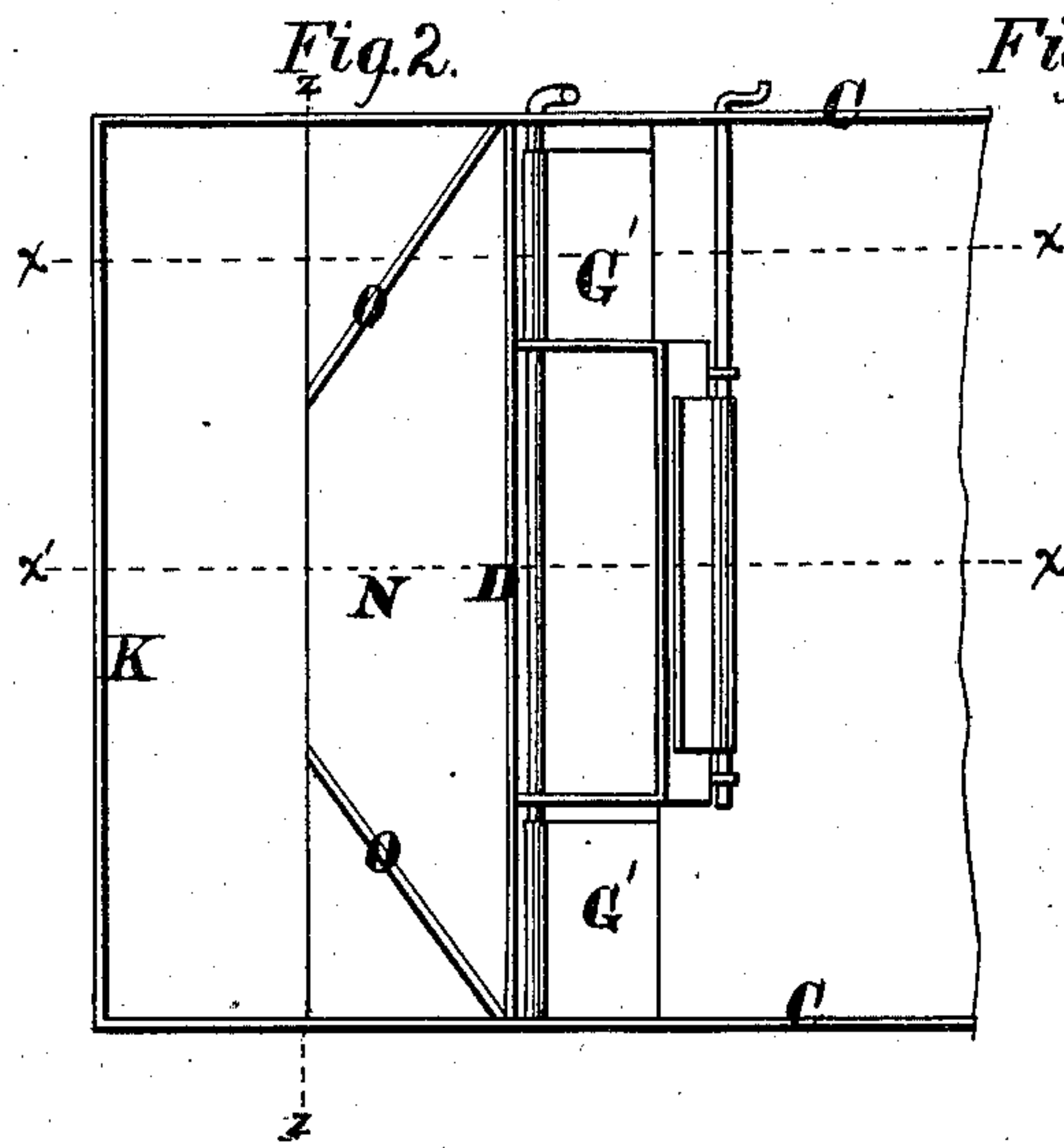
INVENTORS.

*A. C. Corse & M. G. Fagan, by
 Prindle and Co., their Attys*

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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. **163,158**, dated May 11, 1875; application filed April 14, 1875.

CASE 4.

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 improved stove with a portion of its rear end 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. Figs. 3 and 4 are vertical sections of the same upon lines xx and $x'x'$, respectively, of Fig. 2; and Fig. 5 is a vertical cross-section upon line zz of Figs. 2, 3, and 4.

The design of our invention is to enable a water-reservoir attached to or upon the rear end of a three-flue cooking-stove to be heated by direct contact with the heated escaping products of combustion, or by the radiation only of heat through the back plate, as may be desired; to which end it consists, principally, in the employment of openings within the plate which separates each descending flue from the reservoir-casing, in combination with a damper, which may be caused to close either the upper of said openings or said flue between the same and the lower opening, substantially as and for the purpose hereinafter specified. It consists, further, in a reservoir-chamber having at its lower side a sheet-flue, which extends between its ends and from its front wall partly to its rear wall, and furnishes a passage for the heated escaping products of combustion from said chamber to the rear flues of the stove, substantially as and for the purpose hereinafter shown. It consists, further, in the vertical flue-strip which extends diagonally inward and rearward from the outer side of the inlet-opening from each descending flue to the reservoir-chamber, and causes the entering current of heated gases to pass to the central rear portion of said chamber, substantially as and for the purpose hereinafter set forth. It consists, finally, in combining, with

the descending flues and reservoir-chamber, the inlet and outlet openings, rolling dampers, sheet-flue, and diagonal flue-strips, substantially as and for the purpose hereinafter shown and described.

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 or sheet-flue F, descending flues G and G, bottom oven-flues H and H', and descending flue I, all of usual construction. Upon the outer side of the rear plate D is secured a reservoir-casing, K, which has the usual form exteriorly, and incloses a chamber, L, that is somewhat deeper than is ordinarily required. At a point just below the bottom of the reservoir M, to the bottom of the chamber L, the plate D is removed between said chamber and each descending flue G, and at the vertical centers of such openings g and g' is placed a flue-strip, N, which extends horizontally between the ends of the casing K, and from said end plate D rearward to or beyond the center of said chamber L, said plate operating to divide each of said openings g , and to form a sheet-flue, l , at the lower front side of said chamber. To the front edge of the flue-plate N, within each flue G, is hinged a damper, G', which has such length, horizontally, as to cause it to substantially fill said flue in such direction, while vertically said damper has such dimensions as to cause it, when turned upward to the position shown by the dotted lines of Fig. 2, to close the upper opening g .

When turned downward to the position shown by the full lines of Fig. 2, the damper G' cuts off the flue G, and forces the heated gases passing downward through the same to pass rearward into the reservoir-chamber L, around the flue-plate N, into the sheet-flue l , and thence forward through the lower opening g' into said flue g again, after which said gases pass through the lower oven-flues and ascending flue in the usual manner.

In order that the heated gases may be prevented from passing through the ends only of the chamber, a vertical flue-strip, O, extends from the outer side of each upper opening g

diagonally inward and rearward to the rear edge of the flue-plate N, as seen in Fig. 1, the upper edge of said flue-strip being in contact with the water-reservoir M.

By thus arranging the flue-strips O and O, the heated gases from the descending flues are caused to pass to the longitudinal center of the chamber L before they can enter the sheet-flue l, by which means each portion of the bottom of the reservoir M receives its proportion of heat from said gases.

When the dampers G' G' are turned upward, so as to close the upper openings g and g, the heated gases take their usual course through the flues of the stove, and the reservoir M receives such heat only as radiates through the end plate D, or is contained within the gases which expand into the chamber L through the lower openings g and g'.

The construction shown affords complete control over the heating of the reservoir, as by it the full heat of the currents of gases can be brought to bear upon the same, said gases can be entirely prevented from coming into contact therewith, or any desired degree of adjustment between such extremes can be obtained by the proper manipulation of the dampers.

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

1. In combination with the flues G and G and the reservoir-chamber L, the openings g and g', and dampers G' and G', substantially as and for the purpose specified.

2. In combination with the reservoir-chamber L, the sheet-flue l, located at its lower front side, and furnishing communication between said chamber and the lower portion of the descending flues G and G, substantially as and for the purpose shown.

3. In combination with the reservoir-chamber L, and with the openings g and g, the vertical diagonal flue-strips O and O, arranged substantially as and for the purpose set forth.

4. In combination with the descending flues G and G, and with the reservoir-chamber L, the inlet and outlet openings g and g', respectively, the rolling dampers G' and G', the sheet-flue strip N, and the vertical diagonal flue-strips O and O, all arranged to operate in the manner and for the purpose substantially as shown and described.

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.