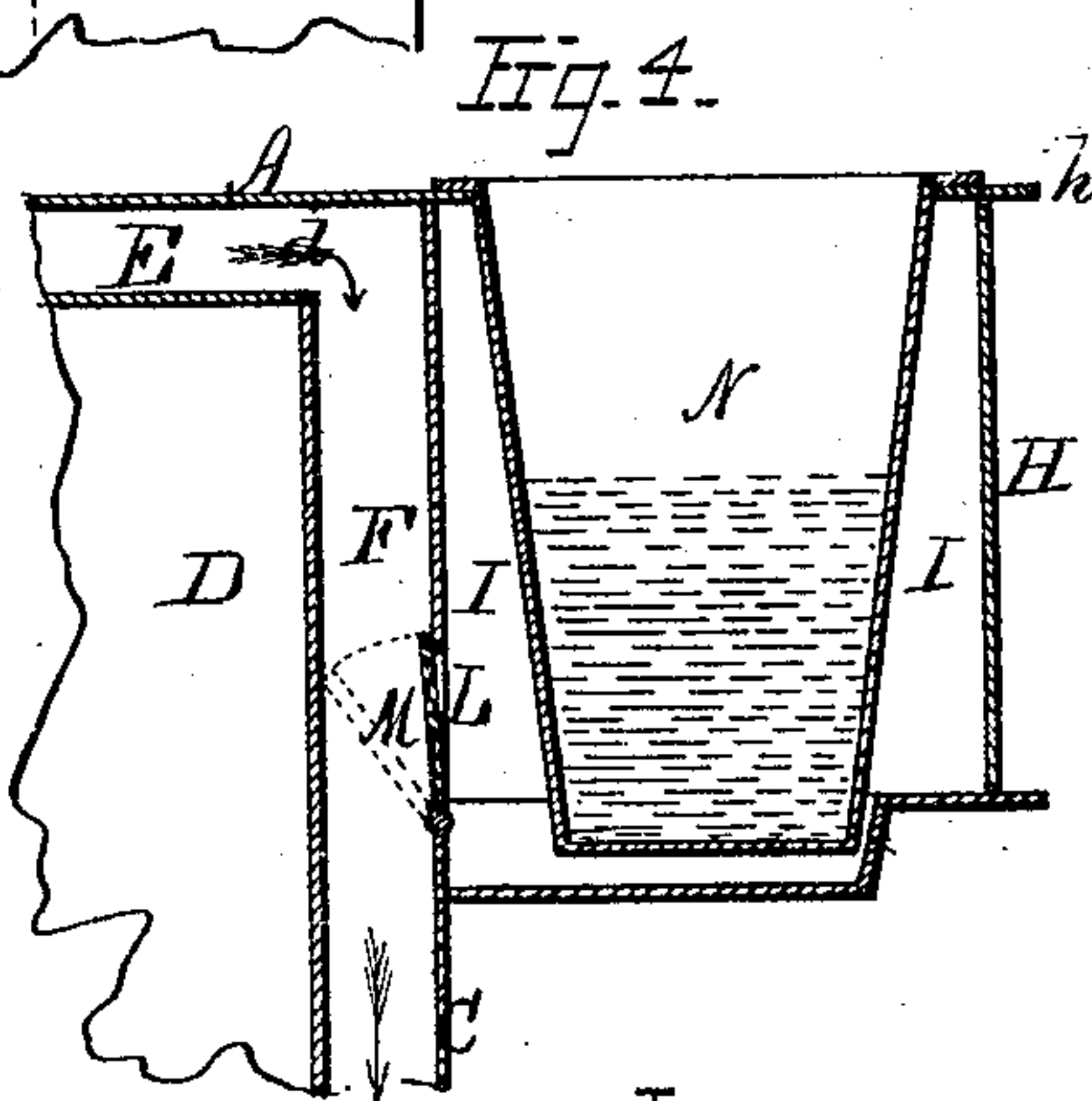
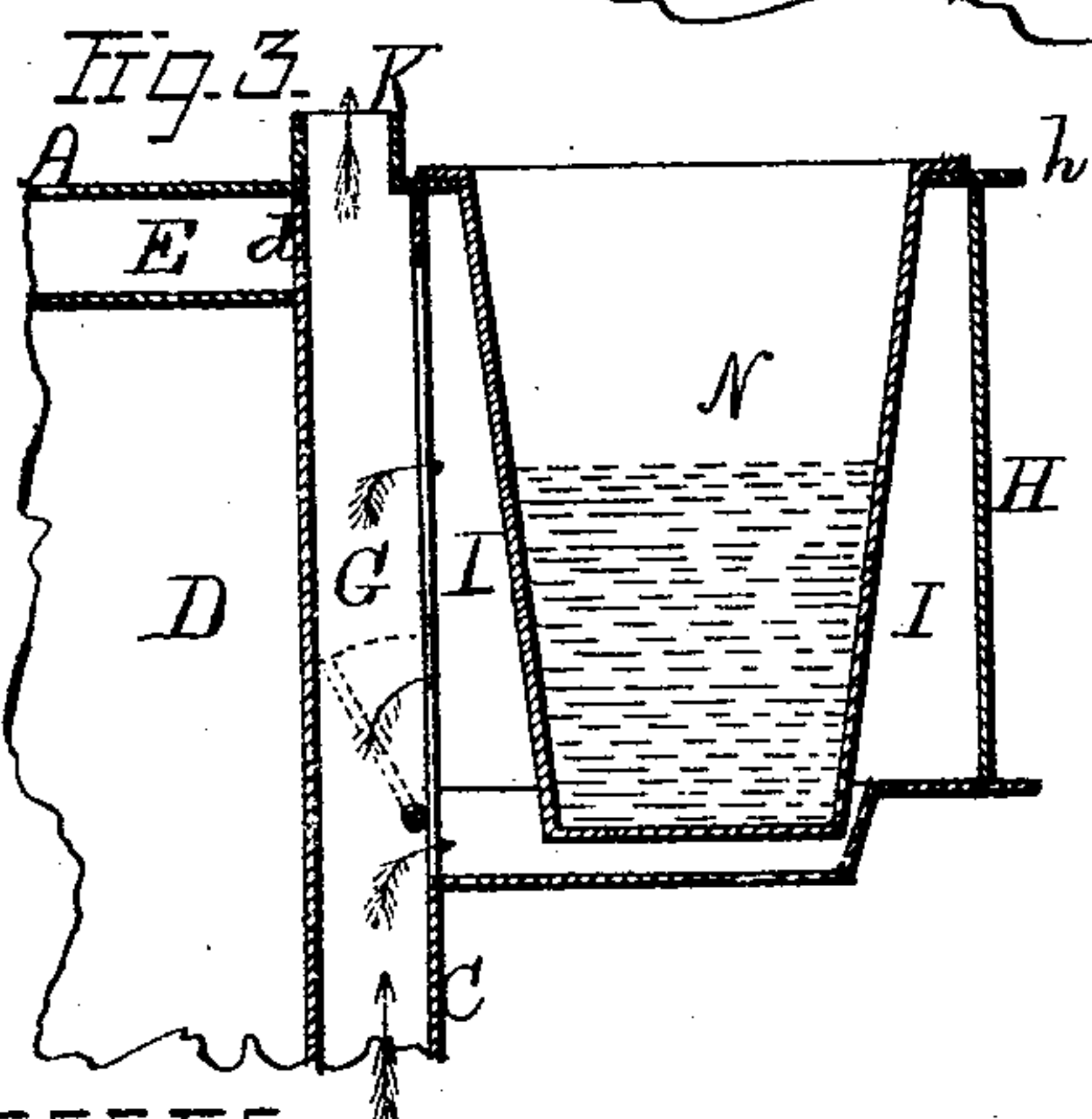
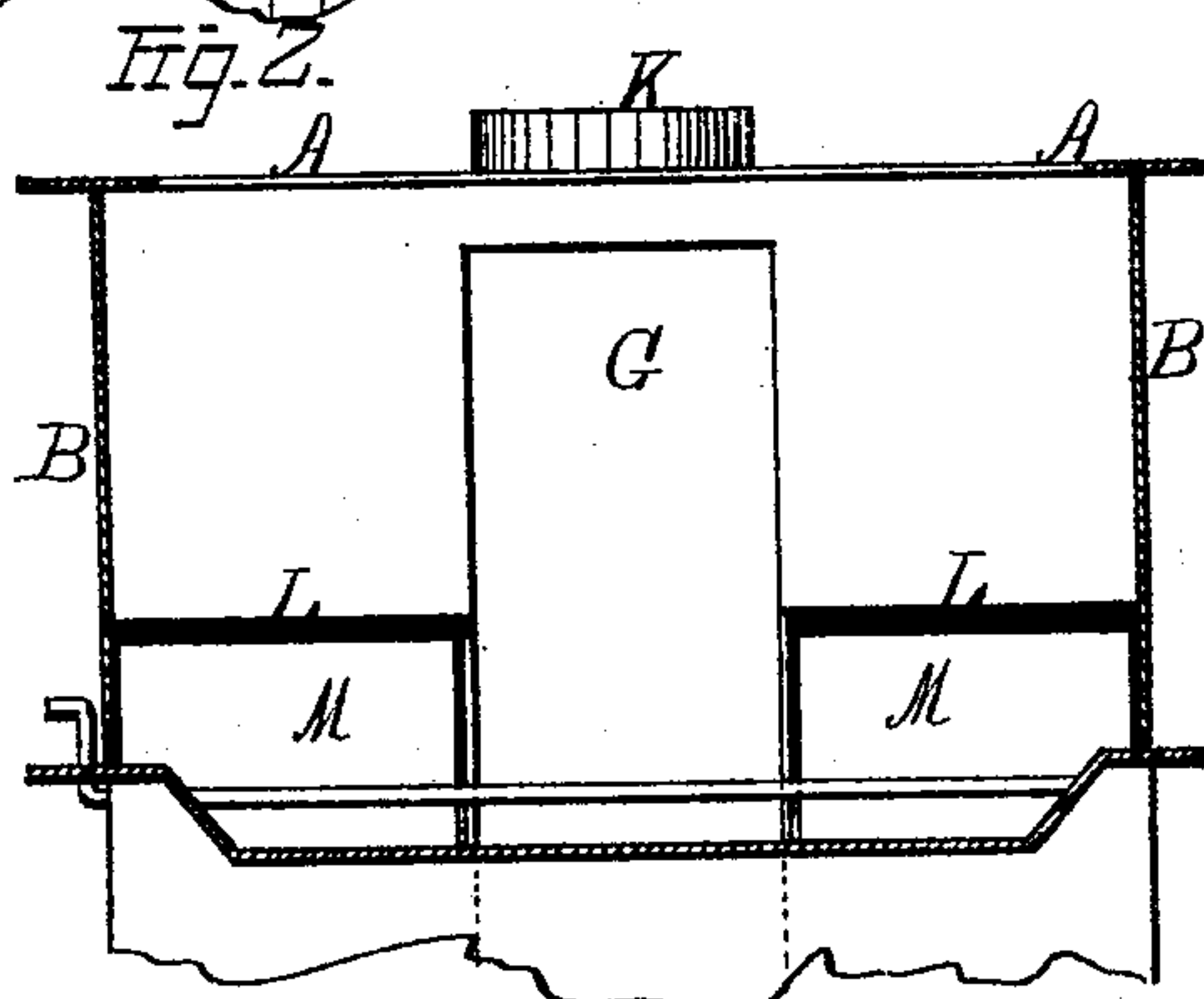
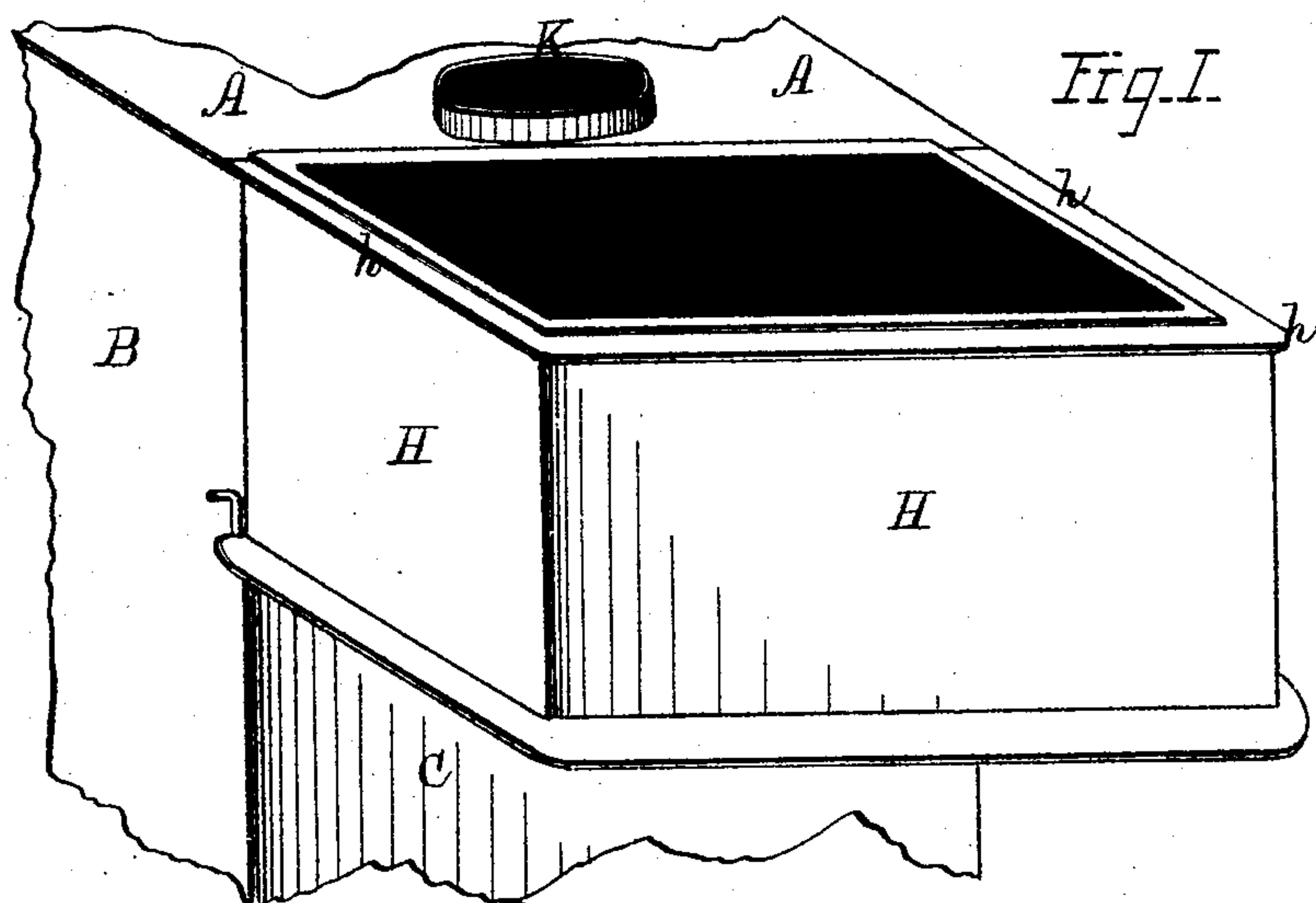


G. G. WOLFE.
Reservoir Cooking-Stoves.

No. 146,969.

Patented Jan. 27, 1874.



WITNESSES=

Gas. E. Hutchinson
John R. Young

INVENTOR.

Gordon G. Wolfe, by
Orindle and Beane, his Attys

UNITED STATES PATENT OFFICE.

GURDON G. WOLFE, OF TROY, NEW YORK.

IMPROVEMENT IN RESERVOIR COOKING-STOVES.

Specification forming part of Letters Patent No. **146,969**, dated January 27, 1874; application filed January 16, 1874.

To all whom it may concern:

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

Figure 1 is a perspective view of the rear end of a stove containing my improved water-reservoir. Fig. 2 is a rear elevation of the same with the reservoir and its casing removed. Fig. 3 is a vertical section of said stove upon a line extending from front to rear, through the center or ascending flue, and Fig. 4 is a like view of the same upon a line passing through one of the side or descending flues.

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

The design of my invention is to enable water within a reservoir attached to a stove to be heated in an expeditious manner without interference in any material degree with the operation of the oven; and it consists in a cooking-stove provided with a chamber for receiving and inclosing a water-reservoir situated in rear of the vertical flues and below the top plate, communicating at its lower side with the descending flues by means of a dampered aperture, and having its front central portion extended forward to the back oven-plate, substantially as and for the purpose hereinafter specified.

In the annexed drawing, A represents the top plate, B and B, the side plates, and C the rear end plate, of a cooking-stove, provided with an oven, D, top flue E, and descending and ascending flues F and G, respectively, all in the usual manner. Secured to or upon the rear end of the stove, from the top plate A downward, is a casing, H, which has, preferably, such lateral dimensions as to bring its ends flush with the side plates B B, while from front to rear, and in a vertical direction, the dimensions of said casing are suited to the capacity of the reservoir to be contained therein. From a point near the top plate A downward to the lower side of the chamber I, formed by the casing H, the end plate C is removed in

rear of the center or ascending flue G, so as to combine said flue and chamber, and cause the ascending current of heated gases from the former to expand into and circulate through the latter before escaping into and through the exit-flue K. Near the lower side of the chamber I the end plate C is removed in rear of each descending flue F, so as to form an opening, L, which corresponds in size to the transverse area of said flue, so as to permit the contents of the latter to pass rearward through the former into said chamber. A damper, M, is provided for each opening L, which damper may be pivoted at its lower edge so as to turn forward and close the flue F while unclosing said opening, as shown in the drawings, or it may be constructed in any well-known manner, so as to enable said opening to be opened or closed without reference to said flue. The chamber I is now ready for the reception of the reservoir N, which, as seen, is supported by the top plate *h* of the casing H, or in such a manner as to bring its upper edge against the same, and has between its sides and bottom a space for the circulation of the heated escaping products of combustion.

If desired, the upper end of the center or ascending flue G may communicate with the top oven-flue E, in the usual manner, by means of a dampered opening; but I prefer to have such communication cut off by a fixed flue-strip, or by extending the rear oven-plate *d* upward at such point to the top plate A.

The stove is now complete, and operates as follows: When the oven is not required for use, the dampers M and M are opened, and the heated gases from the fuel-chamber pass rearward through the top oven-flue E, downward into the descending flues F and F, and rearward through said openings into the chamber I, from whence, after circulating around the reservoir N, said gases pass into the ascending flue G, and from thence into the exit-flue K, having, during their passage through said chamber, imparted a large percentage of their heat to the liquid contents of said reservoir. When the oven is in use, the dampers M and M are closed, and the heated gases pass downward through the entire length of the descending flues F and F into and through the usual bottom oven-flues, and thence upward through

the ascending flue G to the chamber I, into which they expand, and after circulation around the reservoir, are drawn outward through the upper end of said flue G.

It will be seen that while during the use of the oven the gaseous products of combustion are not forced to pass into the chamber I, and that while heating said oven said gaseous products have parted with a portion of their heat, upon reaching the bottom of said chamber said gases will naturally expand into and circulate through the same, while their temperature will still be far above the boiling-point, and sufficient for all of the requirements of the reservoir, and to insure a good draft in the exit-flue. In addition to the heat of the current of gases, the rear oven-plate d will radiate rearward a considerable quantity of heat, which, while affording material assistance to the reservoir, will not lessen the efficiency of

the oven, for the reason that at such point said oven always possesses a surplus of heat, which can be spared without injury.

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

In a cooking-stove, a chamber for receiving and containing a water-reservoir, situated in rear of the vertical flues and below the top plate, communicating at its lower side with the descending flues, by means of dampered apertures, and having its front central portion extending forward to the back oven-plate, substantially as and for the purpose specified.

In testimony that I claim the foregoing, I have hereunto set my hand and seal this 14th day of January, 1874.

GURDON G. WOLFE. [L. S.]

Witnesses:

WILLIAM TOUGH,
JAFEW VAN BUREN.