

(No Model.)

W. MILLER.
RANGE.

No. 435,703.

Patented Sept. 2, 1890.

FIG. 1.

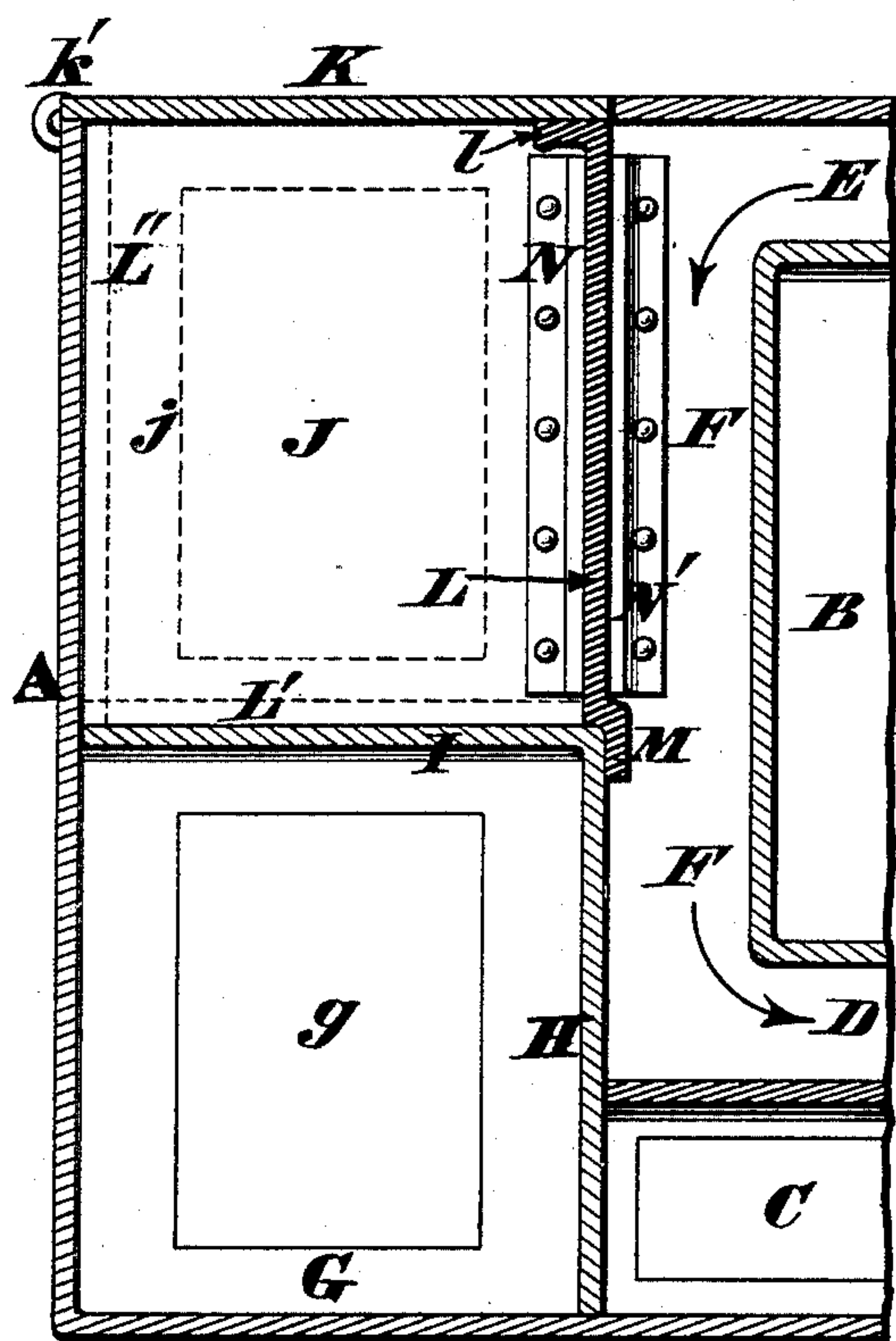


FIG. 2.

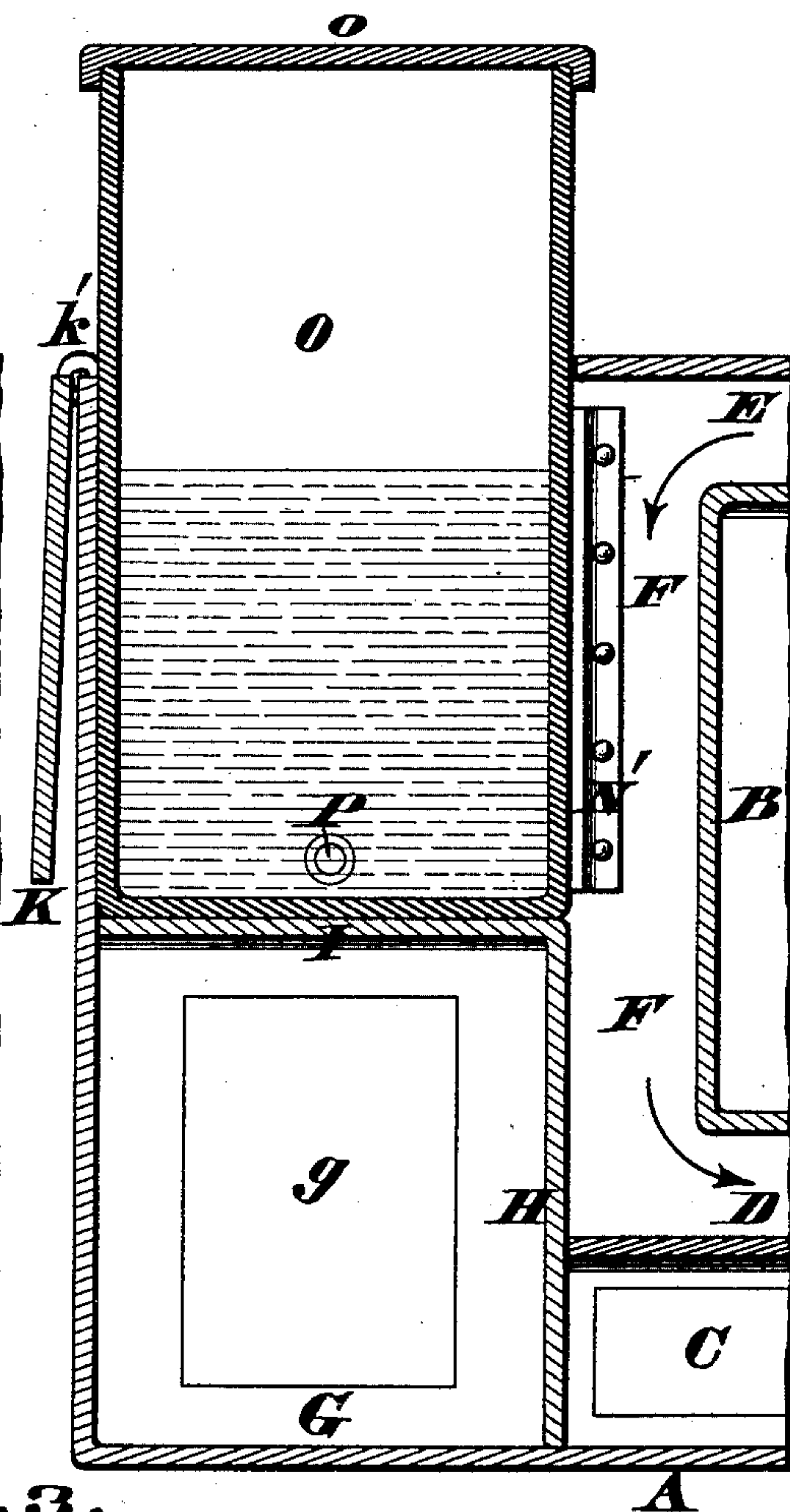
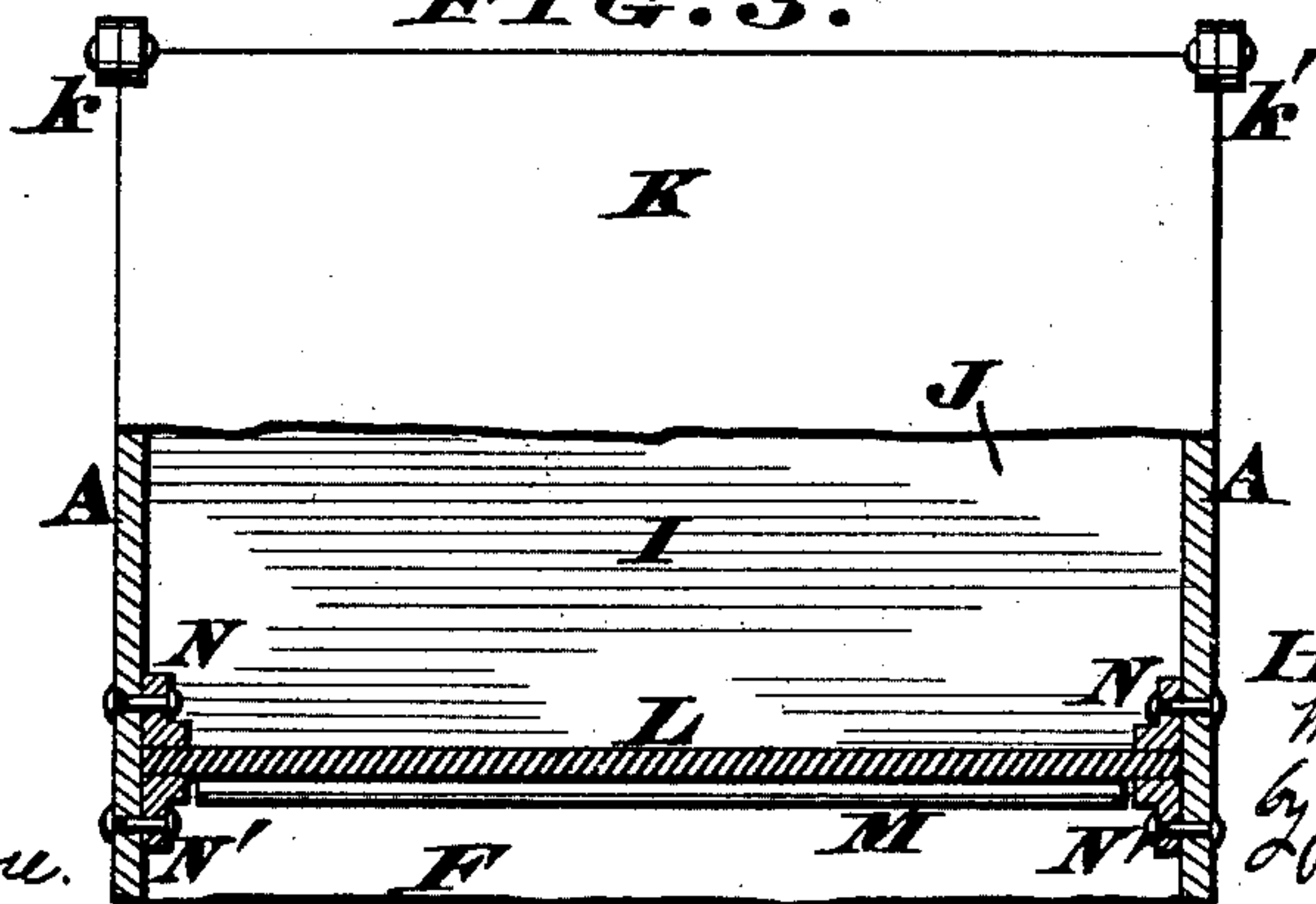


FIG. 3.



Attest
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RANGE.

SPECIFICATION forming part of Letters Patent No. 435,703, dated September 2, 1890.

Application filed April 22, 1890. Serial No. 348,976. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MILLER, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Ranges; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form part of this specification.

The object of my invention is to construct a range in such a manner as to enable the ready application thereto of a hot-water reservoir when occasion requires, which result is accomplished as follows: The range is provided with a special chamber on one side of the "diving-flue," which chamber is separated from said flue by a shiftable or swinging or removable plate, which usually occupies suitable guides when the reservoir is not needed; but when the latter is to be used said plate is shifted or swung aside or lifted bodily out, and the reservoir inserted within said chamber. Consequently one side of the reservoir serves as a wall for a large portion of the diving-flue, by which arrangement the water contained within said reservoir is heated without increasing the consumption of fuel, as hereinafter more fully described.

In the annexed drawings, Figure 1 is a vertical section of that portion of a range to which my improvements are applied, a vertically-shiftable plate being seen in position between the special chamber and diving-flue. Fig. 2 is a similar section of the range, but showing said plate removed and a reservoir inserted within the special chamber. Fig. 3 is a sectionized plan of a portion of the range.

A represents the outer wall or casing of any approved form of range; B, the oven of the same; C, a warming-closet beneath the oven; D, a horizontal flue between said closet and oven, and E a horizontal flue above the latter.

F is a diving-flue connecting the upper flue E with the lower flue D.

G is a hot closet having a door *g*, and being separated from the rest of the range by a vertical wall H and horizontal plate I.

J is the special chamber located above the

closet G and having a lid K hinged to the top of the range at *k k'*. (See Fig. 3.) Furthermore, this chamber may have a side door, if desired, as indicated by the dotted lines *j*.

L is a removable plate separating the chamber J from diving-flue F, which plate is in line with the vertical wall H, and has at its top a lip *l*, wherewith said plate is readily handled.

M is an angular flange which enables the plate to rest snugly upon the wall H of closet G.

N N' are vertical guides secured to the shell A and arranged in pairs, as seen in Fig. 3, which guides confine the plate L in its proper place within the range.

O in Fig. 2 is a hot-water reservoir of such size and shape as to fit snugly within the chamber J, said reservoir or tank being provided with a lid or lids *o* and a faucet attachment P.

For ordinary use the plate L is inserted within the guides N N', thereby separating the chamber J from the diving-flue F, which chamber can now be employed as a closet for warming dishes, &c., the closet being heated by the products of combustion descending said flue, as indicated by the arrows; but when it is desired to fit a tank or reservoir to the range the lid K is thrown back, the plate L grasped by its lip *l*, and then drawn bodily out of the opening thus formed in the range-top, after which act the tank or reservoir O is inserted within the chamber J and allowed to rest upon the plate I, one side or end of said tank being practically in line with wall H, as seen in Fig. 2. It is evident that this side of the tank now forms a large portion of the flue F, and is directly exposed to the products of combustion descending said flue. Consequently the water in the tank is constantly kept hot without increasing the consumption of fuel. By removing the tank, reinserting the plate L, and closing the lid K the range is restored to its normal condition.

From the above description it is evident that the range can be converted from its ordinary purpose to a water-heater, or vice versa, in a few minutes, and without unscrewing a bolt or nut or requiring the assistance of a stove-fitter or other artisan.

Finally, although preferring the vertically-

shiftable plate L as a means of separating the diving-flue F from the special chamber J, still the invention is not limited to this precise arrangement, as it is evident that the same
5 result can be accomplished in various ways, one modification being shown by the dotted line L' in Fig 1. This dotted line indicates that the plate can be simply turned down, so as to rest upon the other plate I, forming the
10 top of chamber G; but the dotted line L'' in said illustration shows that the plate can be slid back and occupy a vertical position within the chamber J.

I claim as my invention—

15 1. The combination, in a stove or range, of an oven B, an upper flue E, leading from the fire-pot or furnace and connecting with a diving-flue F at the end or side of said oven, and a chamber J, separated from said flue F by a
20 movable plate L, which plate can be so shifted as to afford an unobstructed communication between the flue F and chamber J, and there-

by permit the insertion within said chamber of a reservoir, in order that one side of the latter may serve as a wall to said flue F and
25 be in direct contact with the products of combustion descending therein, substantially as described.

2. The combination, in a stove or range, of an oven B, an upper flue E, leading from the
30 fire-pot or furnace and connecting with a diving-flue F at the end or side of said oven, and a chamber J, separated from said flue F by a vertically-shiftable plate L, which serves as a
35 wall for one side of this flue, said plate being guided by a pair of upright flanges N N' N' N', secured to the range-casing, all as herein described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM MILLER.

Witnesses:

JAMES H. LAYMAN,
FRANCIS M. BIDDLE.