

D. H. NATION.  
Range.

No. 226,340.

Patented April 6, 1880.

Fig. 1.

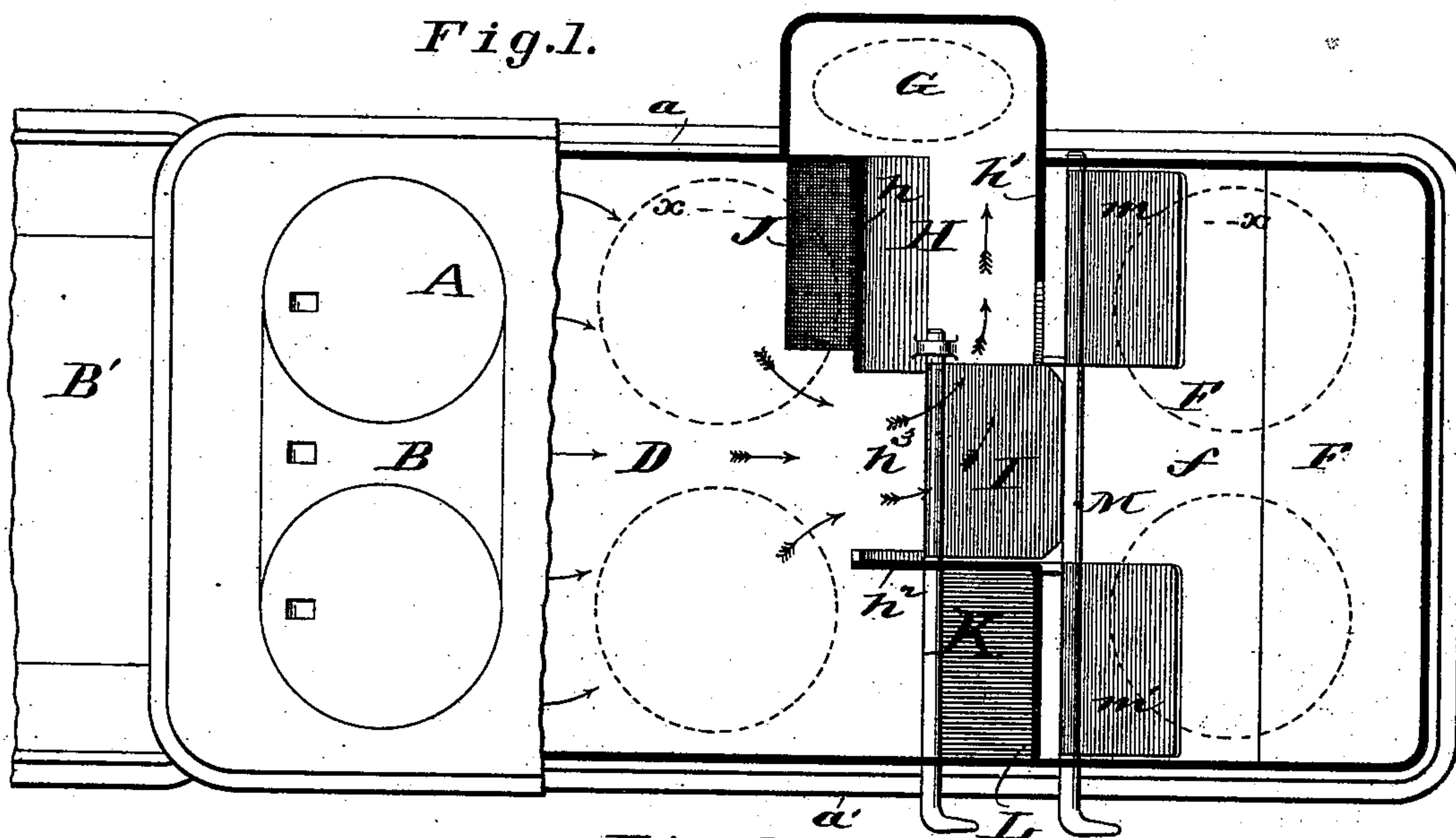
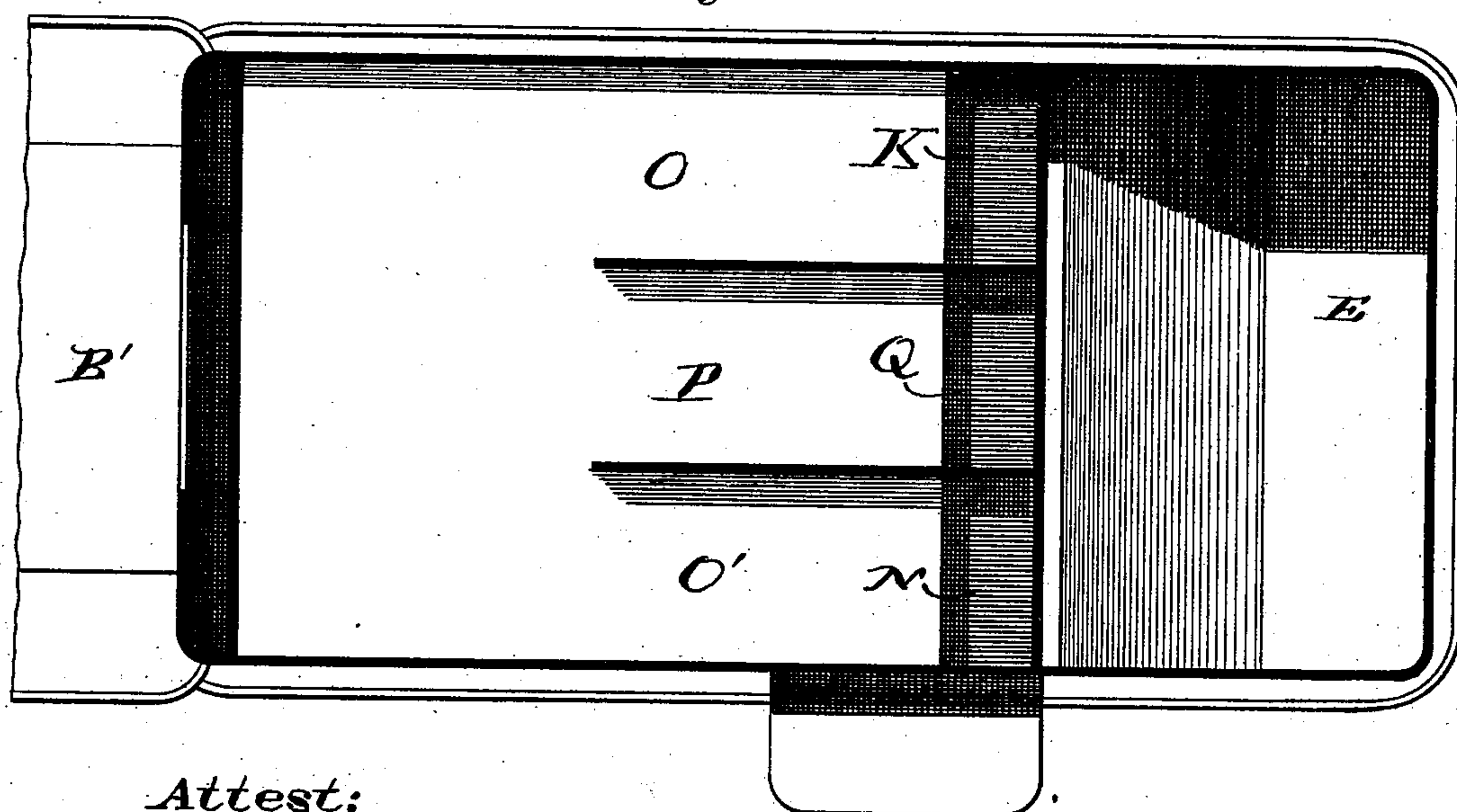


Fig. 2.



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Inventor:

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Fig. 3.

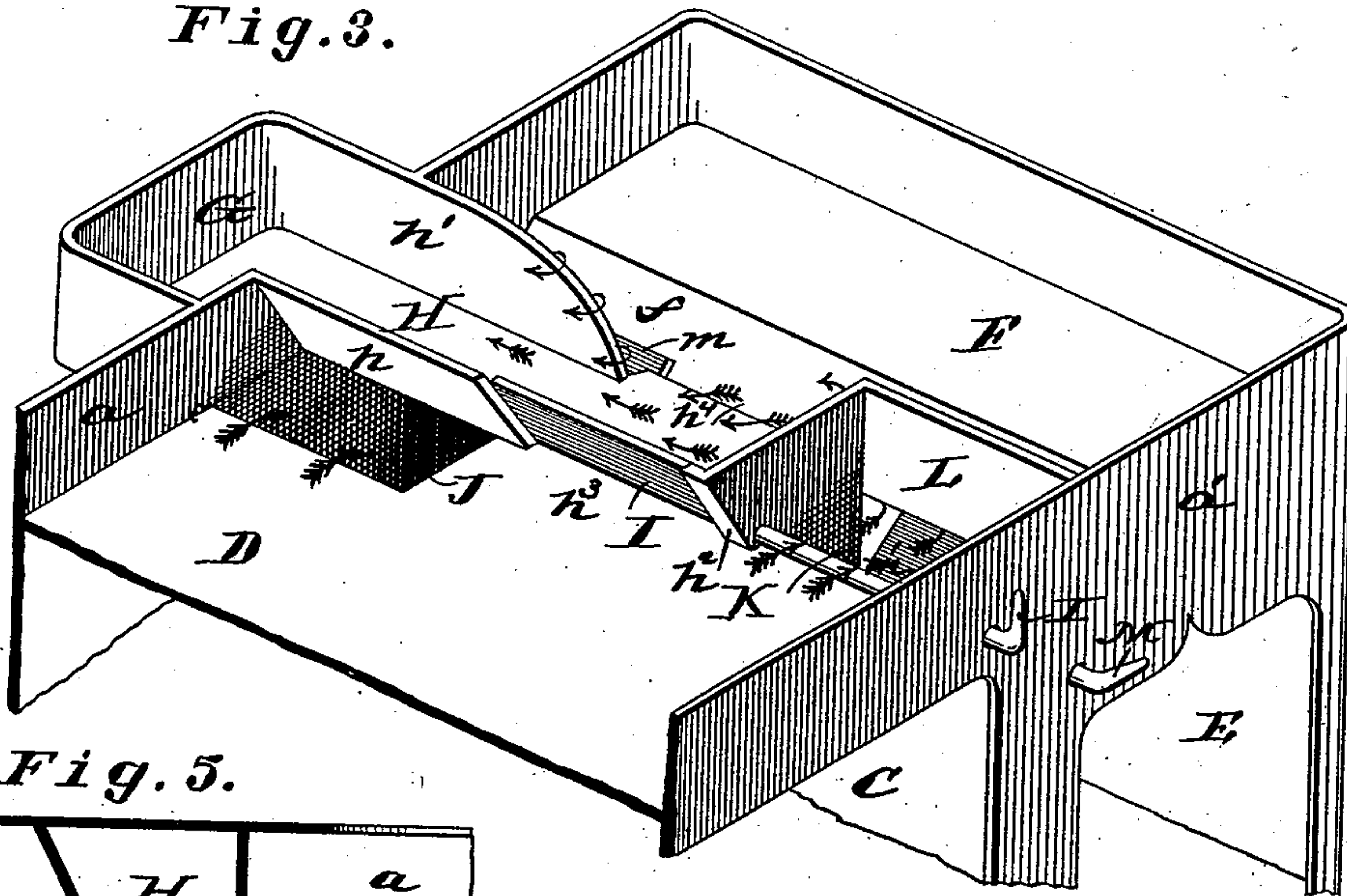


Fig. 5.

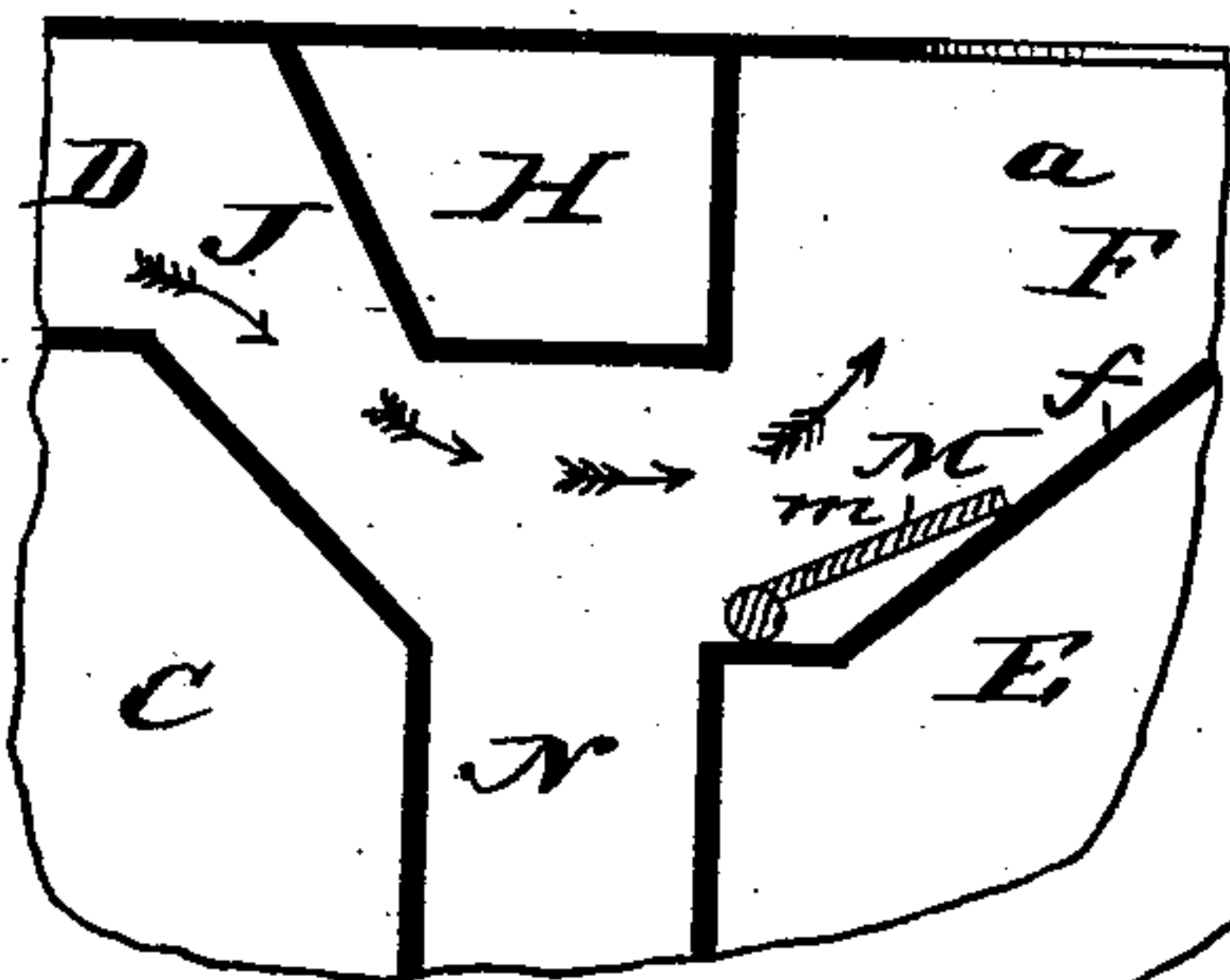
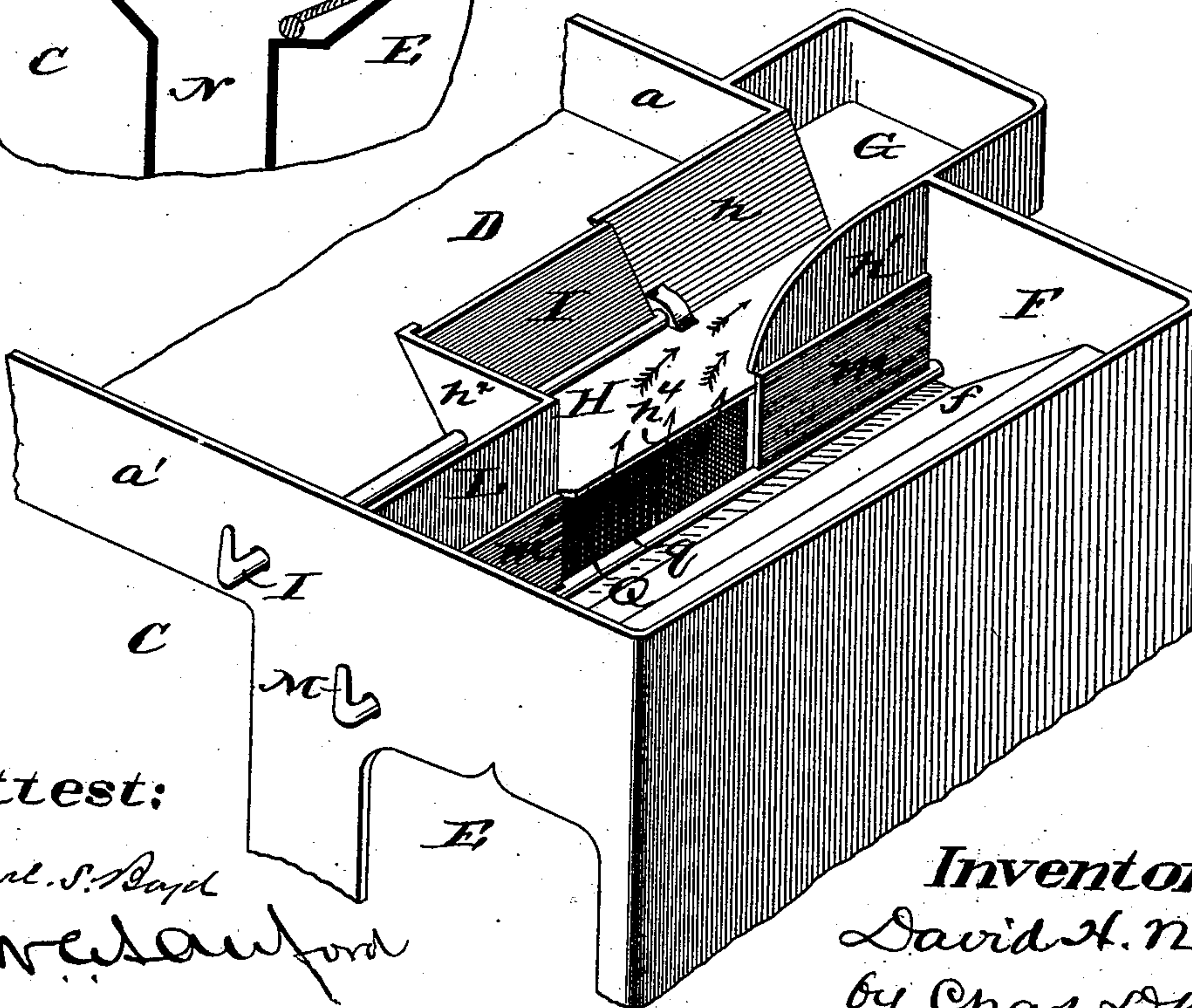


Fig. 4.



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# UNITED STATES PATENT OFFICE.

DAVID H. NATION, OF ST. LOUIS, MISSOURI, ASSIGNOR TO GILES F. FILLEY,  
OF SAME PLACE.

## RANGE.

SPECIFICATION forming part of Letters Patent No. 226,340, dated April 6, 1880.

Application filed January 28, 1880.

*To all whom it may concern:*

Be it known that I, DAVID H. NATION, of St. Louis, Missouri, have made a new and useful Improvement in Ranges, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a plan of a range having the improvement, the top plate of the range being broken away; Fig. 2, a bottom view of the range, the bottom plate being removed; Fig. 3, a view, in perspective, of the upper rear end of the range, the view being from the forward end of the range and the top plate being removed; Fig. 4, another view, in perspective, of the portion shown in Fig. 3, the view being from the rear end of the range and both dampers being closed; and Fig. 5, a detail, being a vertical section taken on the line  $xx$  of Fig. 1.

The same letters denote the same parts.

The present improvement is valuable in combining the advantages of a three-flue cook-stove and range.

It has relation more especially to the system of flues and dampers at the rear of the oven.

Referring to the drawings, A represents the improved construction, B being the fire-place, arranged at what may be termed the forward end of the range; B', the hearth; C, the oven; D, the flue leading from the fire-place; E, the hot-closet; F, a flue-space above the closet; and G, the final escape, the latter being arranged at the back side,  $a$ , of the range, and preferably directly opposite the space between the oven and closet.

For direct draft from the fire-place into the escape G the course of the products of combustion is, as indicated in Fig. 1, from the flue D into a flue, H, and thence into the escape G.

The flue H extends from the side  $a$  of the range toward the front side,  $a'$ , terminating, preferably, about midway between the sides  $a$   $a'$ , and it is formed by the strips  $h$   $h'$   $h^2$ , the direct entrance to the flue being at  $h^3$ . For the purposes of this direct draft the strip  $h$  is sufficient without using the other strips,  $h'$   $h^2$ ; but when it is desired to heat the flue-space F and the rear end of the range a damper, I, is used to close the direct entrance  $h^3$  into the

flue H, and the strip  $h^2$  becomes of use, and the heat-currents then pass as follows: one portion through a flue, J, beneath the flue H and into the space F, and another portion between the strip  $h^2$  and the side  $a'$ , across the upper end of the diving-flue K, and under a plate, L, that extends from the strip  $h^2$  to the side  $a'$ , and thence into the space F. The heat-currents then pass through the entrance  $h^4$  into the flue H, and to the escape G, as indicated in Fig. 3. As the heat-rays pass into the space F they encounter the inclined plate  $f$ , which aids in deflecting the heat upward to the top of the range.

When the draft is good the entrance  $h^3$  to the flue H may be permanently closed, and the course of the heat-currents, so far as heating the upper part of the range is concerned, may be always through the flues J K F, as last described. The strip  $h'$  aids in properly directing the course of the heat-rays from the space F into the flue H.

To heat the oven, in addition to closing the entrance  $h^3$ , another damper, M, having two parts,  $m$   $m'$ , is used to close the openings from the flues J K, respectively, into the space F, and as shown in Fig. 4. The heat-currents then pass down the diving-flues K N (the flue J connects with the flue N) through the side bottom flues, O O', the center bottom flue, P, ascending flue Q, thence through the opening  $q$  into the flue-space F, and thence into the flue H and out at G, as indicated in Fig. 4. In this way the heat is more evenly distributed throughout the range and more evenly applied to the oven than in ranges as heretofore constructed.

All parts of the construction, especially the flues K N Q, can be readily reached for cleaning. A further advantage arising from the improvement is that when the heat is not being sent around the oven all portions of the top of the stove can be more evenly heated than in the ordinary cook-stove.

By closing the damper I, or, what is equivalent thereto, by making the damper an extension of the strip  $h$ , and by directing the heat, as described, to the upper rear end of the range, the heat is kept from drawing toward the mid-

dle of the flue-space beneath the top of the range.

I claim—

1. The combination, in a range, A, of the  
5 flues D, J, H, and F, said flue J passing beneath the cross-flue H, substantially as described.
2. The combination of the flues D J K F, plate L, strips  $h$   $h^2$ , flue H, crossing above flue  
10 J, and damper I, substantially as described.
3. The combination of the flues J K N O O' P Q F H and dampers I M, said flue J passing  
beneath the cross-flue H, substantially as described.
4. The combination of the flues D, J, H, and 15  
N, said flue J being beneath the flue H, substantially as described.

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Witnesses:

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